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ABSTRACT

The SchoolTech initiative, a state-funded pilot project, was designed to empower teachers to develop innovative approaches to academic and extracurricular activities using technology. Elementary and secondary schools (n=10) in North Carolina were provided with hardware and software that had the capability of accessing Internet resources. Teachers explored resources for numerous content areas and collaborated with their counterparts across the state, region, country, and world. Project participants developed interdisciplinary and staff development activities; these are contained in this handbook. The activities are user-friendly, can be adapted for use at many grade levels, and are presented in a progressive order, according to the grade level for which they are appropriate. For each, the following information is provided: activity title; author; school, including address and phone number; subject areas; grade level; North Carolina Course of Study Goals; background information/pre-lesson instruction; materials/equipment/technology; instructional strategies/procedures; student evaluation; follow-up activities; and suggestions for replication. Some worksheets, handouts, and instructional booklets are also included. Appendices contain school site addresses; technology plan; the multi-tasking classroom and typical unit; Internet resource addresses; and acceptable use policies. (AEF)

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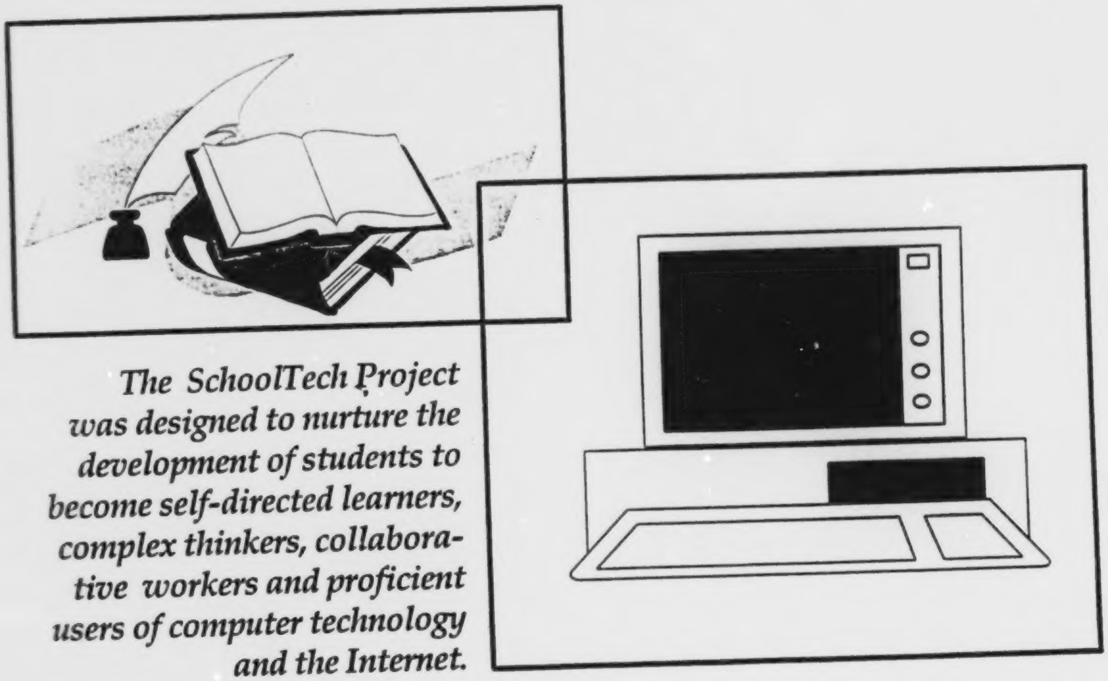
SCHOOL*TECH* Activities Handbook

Successful, User-friendly Lessons and Units



The SchoolTech Project was designed to nurture the development of students to become self-directed learners, complex thinkers, collaborative workers and proficient users of computer technology and the Internet.

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SCHOOL*TECH*
Activities Handbook
Successful, User-friendly Lessons and Units

Cook Middle School
Coopers Elementary School
Glade Creek Elementary School
Grady Brown Elementary School
John T. Hoggard High School
Lewis Chapel Middle School
Dalton McMichael High School
New Hope Elementary School
Northside High School
Woodfin Elementary School

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North Carolina Science and Mathematics Alliance
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Board of Science and Technology

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Permission to reproduce all or portions of the
School*Tech* Activities Handbook
for use by faculty, administrators and parents
is granted.

"I thought we were on the verge of doing something great, but then I realized we were doing something great all along!"

— School*Tech* Lead Teacher

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INTRODUCTION

The School*Tech* initiative, a state-funded pilot technology project, under the auspices of the North Carolina Science and Mathematics Alliance, was designed to "develop a cadre of teachers supported to explore networked resources and curriculum applications, including those available on the Internet." Project sites provided collaborative learning environments that encouraged the development of independent learners, not only in the student populations, but within the adult populations as well. A major goal of the Project was to positively change the culture of each school by empowering teachers to design novel and innovative approaches to academic and extracurricular activities.

Ten school sites were provided with hardware and educationally appropriate software that had the capability of accessing the resources on the Internet. Teachers extensively explored resources for numerous content areas and collaborated with their counterparts across the state, region, country and world. With the Internet connectivity provided by the project, a higher degree of access to information beyond textbooks was made available. As a result, students were able to build extensive knowledge bases that allowed them to engage in inquiry learning, do active research, develop hypotheses and collaborate with other students. Staff development activities were also conducted by project participants for their colleagues.

Contained in this handbook are interdisciplinary activities that were developed by teachers at each of the schools involved in this project. Activities were successful and generated high levels of enthusiasm, self-motivation and participation. They are user-friendly and can be adapted for use at many grade levels.

Title: A Look At Whales—The Tales of Whales

Author: Susan Nichols

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown School Road
Hillsborough, N.C. 27278

Phone Number: (919) 732-6138

Subject Areas: Science/Letter Study

Grade Level: Kindergarten

N.C. Standard Course of Study Goals:

2.1 Demonstrate the ability to observe.
2.2 Demonstrate the ability to classify by exploring animal groupings.
4.1 Exhibit a positive attitude toward learning science.
Investigate animals and their behaviors within natural environments.

Background information/Pre-lesson instruction:

Our letter for the week was "Ww." We tried to relate each letter to a science activity that is motivating to the kindergarten students. We read books about whales. We did research from the encyclopedia on whales.

Materials/Equipment/Technology:

Computer; access to the Internet site: "***A Look At Whales***"; TV Presentation Device; TV monitor.

Instructional Strategies/Procedures:

We had done prior work on whales. We used the Internet to pull up the program "***A Look At Whales***." We showed each type of whale on the TV monitor so that all students could see. One adult worked the computer and the other adult did the narration. We allowed for questions about each whale.

Student Evaluation:

Teacher observation; oral questioning to assess student knowledge of information revealed through the informational, dictated story.

Follow-up Activities:

Each student received a whale outline. They had to dictate an information story related to their favorite species of whale. On the Internet, we saw: Blue Whales, Beluga Whale, Grey Whale, Right Whale, Sperm Whale, Orca Whale, Narwhal, Minke Whale. They had to indicate if their whale was a baleen whale or a toothed whale.

Title: Multicultural Week

Authors: Hunter Stone, Sue Smith

School: Coopers Elementary

Address: Rt. 2 Box 209-A
Elm City, NC 27822

Phone Number: (919)-937-5612

Subject Areas: Social Studies

Grade Levels: 2

Time Required: One or more class sessions

NC Standard Course of Study Goals:

Social Studies
Goal 5: The learner will evaluate relationships between people and their governments.
Goal 7: The learner will analyze religious and other cultural traditions.
Information
1.4: The learner will relate ideas and information to life experiences.
Computer
Goal 3: The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.

Background Information/Pre-Lesson Instructions:

Students will become familiar with the Royal Family, some British traditions and recognize differences in cultures.

Ms. Stone discusses: Royal family:
Windsor; Married name-Mountbatten-called Mountbatten-Windsor.
Biography of Queen Elizabeth-became Queen at 25 when Father died (2-6-52); born in London April 21, 1926 (70 years old); became heiress to the throne at age 10 and was trained in early childhood for royal duties; pledge to the British people: devote her whole life, "whether long or short to the service of our great imperial family"; married Philip Mountbatten on November 20, 1947; is a keen horsewoman, keeps race horses and frequently attends races.

Ms. Stone named the Queen's four children and talked about the tradition of four parts to their names: 1st son Charles Philip Arthur George 1948; Daughter Anne Elizabeth Alice Louise 1950; 2nd son Andrew Albert Christian Edward 1960; 3rd son Edward Anthony Richard Louis 1964.

Materials/Equipment/Technology:

English costume (Queen Elizabeth-day wear);
Books - QUEEN'S DOLLHOUSE, THE ROYAL JEWELS and THE QUEEN'S JEWELS;
World Book Vol. E:
Internet connection.

Instructional Strategies/Procedures:

Ms. Stone, (TAG facilitator) dressed as the Queen, met in the classroom first and shared all the facts about the Queen, her family and the books. She then prepared the class for a visit to England via the Internet. Ms. Smith (Media Coordinator) "chauffeured" the trip by navigating sites in Webcrawler and Yahoo. Many sites were available. We saw Stonehenge, Buckingham Palace (inside and out), The Royal mews, went on a London tour of different attractions--H.M.S. Belfast, London Science Museum--and checked the weather. Material from each site was printed for the class to take back to their room. Comments and questions were entertained from the students.

Student Evaluation:

Displays from printed material are used for the Multicultural Week Celebration at the end of the school year. Flag is made for Parade of Countries on the first day of Multicultural Week.

Follow-up Activities:

Other web sites could be explored/further searches. Communicate with keypals in England/London. Write, using a word processing program, to the Queen and Royal Family.

Suggestions for Replication:

Follow the same procedure for other K-6 classes using their country.

Title: Teddy Bear Project

Author: Elizabeth Biedenbach

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown Road
Hillsborough, North Carolina 27278

Phone Number: (919) 732-6138

Subject Areas: Social Studies, Art, Technology, Math

Grade Level: 2

Time Required: One month

Background Information/Pre-Lesson Instructions:

The children will plot the travels of teddy bears in different parts of the world. Students in New York, Pennsylvania, Texas, North Carolina, Florida, Oregon, Massachusetts, Illinois, Italy and Japan will E-mail "first person" narratives from the bear describing where the bears have been and what they've seen.

NC Standard Course of Study Goals:

The learner will use geographic terms to describe landforms, bodies of water, weather, and climate.
The learner will demonstrate correct use of software (Kid Pix).
The learner will develop positive attitudes about herself/himself, about others, and about art.
The learner will demonstrate positive attitudes about herself/himself, accept work of others, and be eager to do and see art.
The learner will understand and use standard units of metric and customary measurement.
The learner will estimate one inch or centimeter; measure length to nearest inch or centimeter.

Materials/Equipment/Technology:

Map of world, computer, teddy bear and lots of neat places to take the bear.

Instructional Strategies/Procedures:

1. Talk about the project and get the children all pysched up for the project. Talk about different places to take the bear. The class chose the bear's name (Rock n' Roll) by voting from a list suggested by students.

2. As the narratives were received, I pulled down the map of the world and we found the different places on the map, then compared them with our city. We also discussed the direction of each compared to North Carolina (east, west, south, north). Since the project coordinator selected people in Italy and Japan, this was a good opportunity to talk about peninsulas and islands. I also discussed what oceans were near each of these places.

3. We were supposed to take our teddy bears to three places of interest. The second grade class took a trip to the beach (Wilmington). This was a perfect way to tell people about the different places we can visit in NC. Our class also took the bear to a local ice cream shop, then on a field trip to Duke Gardens.

4. Everyone was to send in three narratives from the bear's point of view (writing). We composed the narratives as a class and talked about the "I" point of view. The teddy bear adventures were to be compiled into a travel log, then snail-mailed to all participants. After learning about all the different visits the bear made, I plan for the children to write about the one place they would like to visit.

5. The next part of the project was to send three bear pictures created with the Kid Pix software. Each child composed a picture which was printed out. The class picked the top three. Once chosen I enrolled the help of the technology specialist (Grace Repass) and sent them on their way. These pictures will also be enclosed in the travel log.

6. We were doing measurement in math. I found an activity which dealt with measuring teddy bears. The lesson introducing centimeters, in which students practiced measuring in several activities, was presented prior to the day students were to bring in their teddy bears. Students cut out a paper meter stick and glued it together. Once glued, they worked with a buddy to measure their teddy bear, then compared the bear to themselves.

Student Evaluation:

After the project, students were given a map test on the seven continents and four oceans. Ninety percent of the class passed the test.

Follow-up Activities:

After viewing the returned travel log, children could make brochures of the different places about which they learned. The children could make a collage of all the different places the bears went.

Suggestions for Replication:

We were given only a week from the time the teddy bear arrived until the travel narratives were due. One suggestion: have a little more time between each activity. The day the graphics were due I had access to enough computers for an extended period of time so that all my children were able to do their pictures in one day. Another suggestion: start this activity early in the year (February or March) in order to have more time for follow-up activities.

Title: The Great Chocolate Experience

Author: Glenda Bequette **<gbequette@isbe.state.il.us>**
Valmeyer School District
603 West Main Street
Valmeyer, IL 62295

School: New Hope Elementary

Address: 137 Stowe Road
Gastonia, NC 28054

Phone Number: (704) 824-1617

Subject Area: Math, Science

Grade Levels: 2 and 3

Time Required:

NC Standard Course of Study Goals:

Math Goals 3, 5, 6
Science Goal 2

Background Information/Pre-Lesson Instructions:

This unit and lesson were published on the Internet on the Kidsphere Mailing List. One class from each state was to be selected to participate. Information, lessons and ideas were E-mailed between originator, Glenda Bequette, selected regional coordinators, and classrooms throughout the United States. If this project is still in existence, it would be worthwhile to join. If not, it can be enjoyed by classrooms who are involved in whole language units with chocolate themes.

Materials/Equipment/Technology:

Teacher lesson plans and student worksheets.
Small bags of M&M's for each child.
Computer with Internet (optional if you wish to correspond with other classrooms on findings).

Instructional Strategies/Procedures:

The students will estimate the number of M&M's in a single package and complete the activities of addition and subtraction. Students will be asked to use letters to represent the color of M&M's and perform operations of addition and subtraction or state relationships (greater than, less than). Students will create graphs for the M&M colors for individuals and whole class findings.

Student Evaluation:

Completed activities.
Showing greater understanding of math concepts during testing.

Follow-up Activities:

E-mail students in other classrooms who are conducting the same lessons. Relate math, science to communication skills by reading novels such as Chocolate Touch. Write stories and poems about chocolate or candy. Upper grade students can tally results and create a database to share with primary children.

Suggestions for Replication:

None

LESSON PLAN: "The Great Chocolate Experience"

INTRODUCTION: Students will explore samples of bags of M&Ms to determine packaging pattern with regard to number and region of the United States.

MATH SKILLS:

A. Whole number computation
B. Predicting
C. Counting
D. Graphing
E. Addition
F. Subtraction
G. Grouping information
H. Relationships
I. Comparing

SCIENCE PROCESSES:

A. Gathering and recording data
B. Interpreting data
C. Estimating
D. Classifying
E. Predicting
F. Sorting

MATERIALS: Small bags of M&Ms. One for each child. The bag size is 8.75 oz. and contains small individual packages of M&Ms. Make sure that they are the plain variety, not peanut.

KEY QUESTION: Are all bags of M&Ms alike in number and color?

BACKGROUND INFORMATION: Bags of M&Ms all contain six colors with dark brown the most common color. Though variations do occur, they are slight enough to allow generalizations with regard to total number in bag and frequency of different color groups.

MANAGEMENT:

1. Each student should be given a bag of M&Ms and a set of student worksheets.
2. Students should make their predictions and do the computation **BEFORE** opening their bags. Students will record their estimates in the "E" column of the graph. Smaller students may use crayons to record their estimates.
3. When recording their "actual" data, students should divide their M&Ms by color groups, counting each color and recording their findings. Students should then add to find the total number in the bag, then count the total number to check their answer.
4. Discuss the difference between their predictions and their actual findings.

PROCEDURE:

1. Pass out bags of M&Ms and have students predict what is in them.
2. Have students open bags, count and record their actual data.

M&M MATH

1. Do not open your bag yet. Guess how many M&Ms are in the bag? ______________________ Graph your estimate of each color.

2. Open your bag, count the M&Ms. How many M&Ms are in the bag? __________________

3. How far off was your guess? ______________

4. Put your M&Ms into sets by color.

G = Green R = Red LB = Light Brown
O = Orange Y = Yellow DB = Dark Brown

5. Write the number of M&Ms you have in each set.

set **G** = ________ set **R** = ________ set **LB** = ________
set **O** = ________ set **Y** = ________ set **DB** = ________

6. Using > or < or =, show the relationship between these sets.

G ______ **R** **Y** ______ **DB** **Y** ______ **LB**
O ______ **G** **DB** ______ **LB** **G** ______ **Y**
G ______ **LB** **Y** ______ **R** **G** ______ **DB**

7. Do these problems:

LB+DB = _____ **O+G** = _____ **O+LB** = _____
R + O = _____ **R+ Y** = _____ **G+LB** = _____
R + G = _____ **Y+ LB** = _____

Make up 4 problems of your own.

8. Put 15 M&Ms in a pile in front of you. Use them to do these problems.

How many piles of four can you make? _____
How many are left over? _____

How many piles of seven can you make? _____
How many are left over? _____

How many piles of five can you make? _____
How many are left over? _____

How many piles of two can you make? _____
How many are left over? _____

9. Put two M&Ms in your mouth. How many are left? _____

10. Eat four more. How many M&Ms do you have left now?

11. Are all bags of M&Ms the same? Find out!! Compare graphs with 4 other students.

12. M&Ms have between ________ and ________ candies in a bag.

13. The least common color is __________________ .

14. The most common color is __________________ .

15. Do what you wish with the rest of your M&Ms. Eat them now, save them or take them home.

WORK AREA:

M&M MATH

Class ______________________________

RED	GREEN	YELLOW	LT. BROWN	DK. BROWN	ORANGE

M&M MATH

E	A	E	A	E	A	E	A	E	A	E	A
RED		GREEN		YELLOW		LT. BROWN		DK. BROWN		ORANGE	

E = Estimate
A = Actual

Name: ______________________________

Title: Tour the World

Authors: Lisa Crocker

School: Grady A. Brown Elementary

Address:
1100 New Grady Brown School Road
Hillsborough, NC 27278

Phone Number: (919) 732-6138

Subject Areas: Social Studies, Geography, Communications

Grade Levels: 2-3 or above

Time Required:

Approximately one 30-45 minute period daily for 3 to 4 weeks.

NC Standard Course of Study Goals:

Goal 2: Learner will distinguish similarities and differences among children, families, and communities in different places.
Goal 3: Learner will analyze multiple roles of children in family, workplace, and communities.
Goal 7: Learner will analyze religious and other cultural traditions in a variety of communities.
Goal 8: Learner will apply basic geographic concepts and terminology (i.e. maps, globes, bodies of water, etc.)
Goal 9: Learner will find locations of other communities.
Goal 10: Learner will learn about the differences and similarities among various means of economic exchange.
Goal 11: Learner will identify economic resources in different communities.

Background Information/Pre-Lesson Instructions:

Students had studied their own community before beginning this project.

Materials/Equipment/Technology:

Atlases, maps, encyclopedias, books about foreign countries, paper & pencil, index cards, access to Internet, and Hyper Studio software.

Instructional Strategies/Procedures:

1. Students will examine a culture for the purpose of finding similarities and differences in institutions and ways of living, citizenship in other cultures, and lives of families and children in a variety of settings.
2. Groups of 3-4 students will be assigned a continent to explore using an atlas in order to choose a country about which they would like to learn.
3. The students will then gather information regarding lifestyle, money, religion, holidays, education, food, dress, customs, sports, and work in the country they have chosen and write this information on note cards.
4. Students will use the Virtual World Map site located through Internet at **http://www.vtourist.com/webmap/europe.htm** and Lonely Planet sites found at **http://www.lonelyplanet.com/dest/dest.htm** to gather pictures and information about the country they have chosen.
5. Students will learn to save pictures to the hard drive by holding down the control and apple keys on the computer and pressing the number 3 key. (This saves the picture on the Macintosh computer.)
6. Students will learn how to create a Hyper Studio Stack and transfer a graphic picture to a presentation card.
7. Students will match their note cards with the pictures they have selected and record their information to the Hyper Studio Card.
8. The product completed will be shown on the computer or through a projection device as a "Multimedia Tour of The Country."

Student Evaluation:

The process involved in the entire project will be monitored by the teacher.
The product will be presented to parents and interested guests at the end-of-the-year event.
Students will view the finished products and evaluate their work for repetition.

Follow-up Activities:

Students will want to make other presentations using this method.
Other research projects may use the skills developed here.

Suggestions for Replication:

If Hyper Studio is not available, pictures can be printed on a color printer and videotaped to create a video tour.
The research method used above could be replicated for another topic at another grade level (i.e. Civil War, States of the U.S.A., the Solar System, etc.)

Title: Weather Readers

Author: Linnea Miller

School: Glade Creek Elementary

Address: 32 Glade Creek School Road
Ennice, NC 28623

Phone Number: (910) 657-3388

Subject Area: Science and Math Skills

Grade Levels: 2-5

Time Required:

NC Standard Course of Study Goals:

Background Information/Pre-Lesson Instructions:

Read a thermometer and check the temperature on "**Windows to the Blue Skies**" for the local area. Keep data on a graph. Compare and contrast data for one month.

Materials/Equipment/Technology:

Computers, "Windows to the Blue Skies."

Instructional Strategies/Procedures:

Students will daily read an outdoor thermometer and will also check the local temperature on "Windows to the Blue Skies." With this data the class will plot information and give weather reports daily.

1. Students will read an outdoor thermometer. Then record daily results.

2. Next students will open the program "Windows to the Blue Skies." They will proceed to the zoom area of the southeast to get local weather information.

3. Local weather data will be recorded and compared to the initial reading from the school.

4. The data collected will be compared and contrasted in graphs.

Title: Sites to Visit

Author: Linnea Miller

School: Glade Creek Elementary

Address: 32 Glade Creek School Road
Ennice, NC 28623

Phone Number: (910) 657-3388

Subject Area: Social Studies

Grade Levels: 3

Time Required:

NC Standard Course of Study Goals:

Goal 7

Background Information/Pre-Lesson Instructions:

URL: Martin Luther King, Jr. **http://www.seattletimes.com/mlk/index.html**

Materials/Equipment/Technology:

Computers, Internet access.

Instructional Strategies/Procedures:

The Martin Luther King homepage is a good resource for students to explore. Areas that may be explored include the man, the movement, the legacy, the holiday, the electronic classroom, and talking about it. From this homepage students can explore information about this national leader.

Student Evaluation:

Follow-Up Activities:

Suggestions for Replication:

Title:	Moon Phases
Author:	Linnea Miller
School:	Glade Creek Elementary
Address:	32 Glade Creek School Road Ennice, NC 28623
Phone Number:	(910) 657-3388
Subject Area:	Science
Grade Levels:	3
Time Required:	1/2 hours

NC Standard Course of Study Goals:

Science 5.2

Background Information/Pre-Lesson Instructions:

Discover patterns in the moon phases.

Materials/Equipment/Technology:

Computers, Internet access.

Instructional Strategies/Procedures:

After completing a gopher search I found this program that is beneficial in my efforts to teach the moon phases patterns that we observe. I have the students independently run this program to help them understand the patterns of the moon's phases.

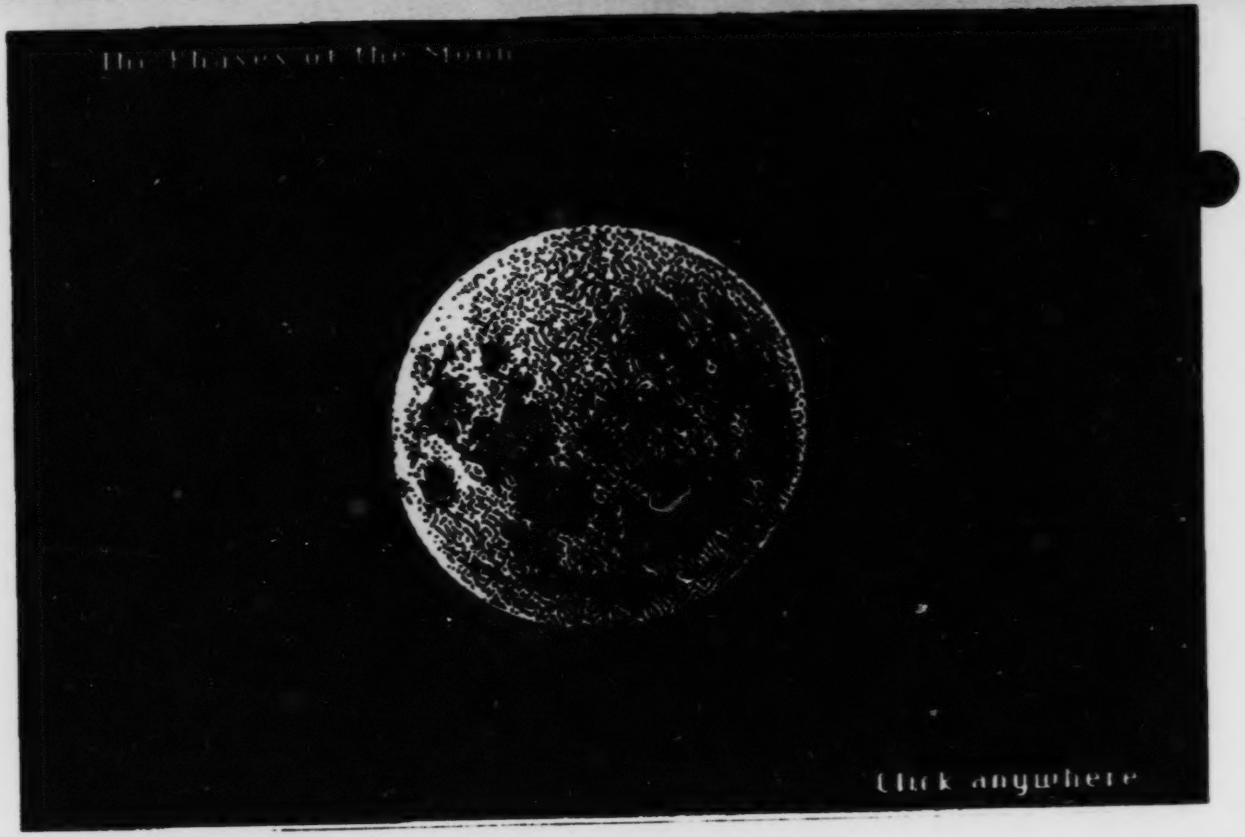
1. The teacher can complete a gopher search using "*moon phases.*" I found this program in this manner.

2. Each child may work on this program at his or her own pace.

Student Evaluation:

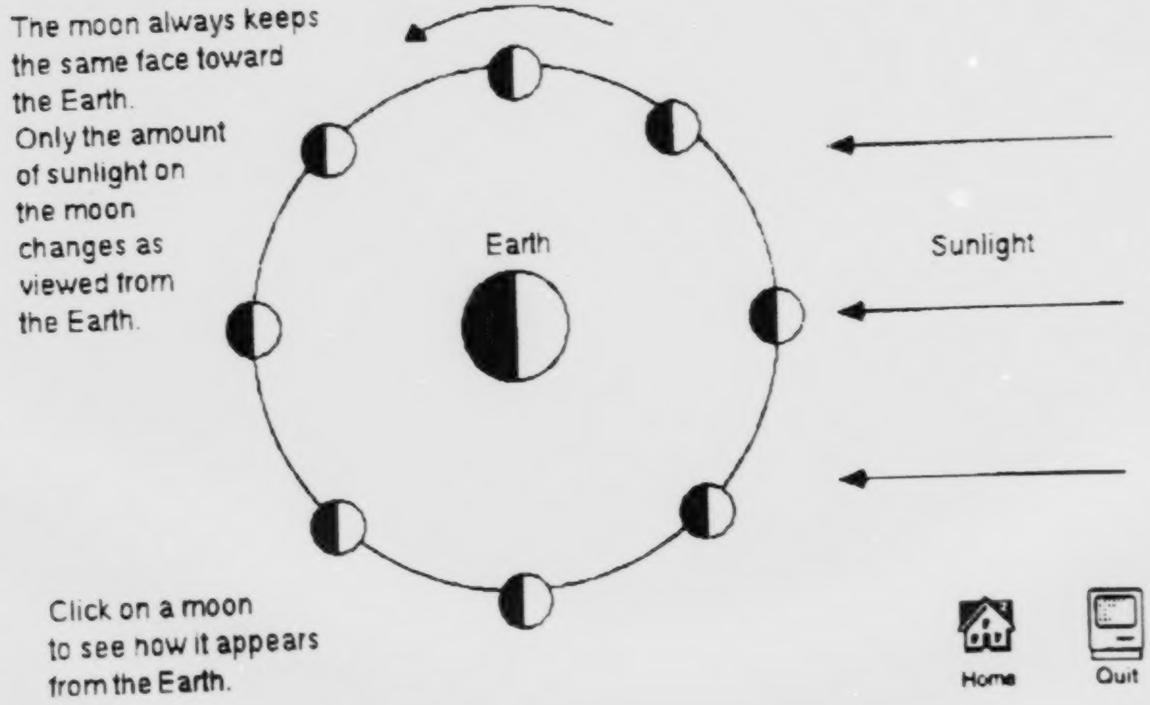
Follow-Up Activities:

Suggestions for Replication:



The Phases of the Moon

Click anywhere



The moon always keeps the same face toward the Earth. Only the amount of sunlight on the moon changes as viewed from the Earth.

Click on a moon to see how it appears from the Earth.

Earth
Sunlight
Home
Quit

Title: Body Measurement

Author: Linnea Miller

School: Glade Creek Elementary

Address: 32 Glade Creek School Road
Ennice, NC 28623

Phone Number: (910) 657-3388

Subject Area: Math and Communication Skills

Grade Levels: 3

Time Required: 1/2 hour

NC Standard Course of Study Goals:

Math 4.1

Background Information/Pre-Lesson Instructions:

Measure body parts using centimeters. Then use the information in a letter.

Materials/Equipment/Technology:

Computers, E-mail access.

Instructional Strategies/Procedures:

Each child completes an introduction and then has a friend measure body parts. The child then puts this information on a word processor. After editing this information it is transferred from the word processor to E-mail. The class information is sent to participating schools. Once information has been exchanged, graphs may be drawn and then compared for each of the participating classes.

1. Teacher will need to locate a school or schools to participate in the project. I found this idea and found a school through a Listserv Discussion Group called Kidsphere at **kidsphere@vms.cis.pitt.edu**
2. Each child will write a letter of introduction, saying name, age, interests and favorites. Then they will measure areas of their body using centimeters. Areas to be measured will include height, arm span, hand span, pace (length of one step), head circumference, wrist circumference.
3. Letters will need to be put on a word processor and then transferred to E-mail. The class list will be sent to other participants.

4. Once results are received the results will be graphed using bar graphs or a computer program called **Excel**. Students will generalize the results.

Student Evaluation:

Follow-Up Activities:

Suggestions for Replication: I put each of the paragraphs on the word processor and then transferred the students' paragraphs to the clipboard. Then I pasted this to my E-mail message that I sent to the participating school.

Hi,

My name is Hilary. I am nine years old and I like to play soccer, basketball and football. My favorite kind of pet is a cat. My favorite color is black.

I measured different parts of my body and my height is 135 centimeters. My arm span is 134 centimeters. The length of my step is 72 centimeters. My head circumference is 52 centimeters. My wrist circumference is 13 centimeters. Please let me hear your measurements.

Hilary

Hello,

My name is Joseph. I am nine years old. I am interested in spelling and math. My favorite thing to do is to go on a trip with my family.

I measured parts of my body. These are my measurements. My height is 145 centimeters. I have a 132 centimeter arm span. My length of one step is 53 centimenter. My wrist circumference is 17 centimeters. My hand span is 17 centimenters.

Your freind,
Joseph

Hi,

My name is Hunter. I am 9 years old. I like to play sports, to read and to be a manager of the basketball team. My favorite thing is playing sports. My favorite basketball team is Duke. My favorite food is shrimp.

I am 150 centimeters tall. My arm span is 145 centimeters. My pace is 61 centimeters. My wrist circumference is 7 centimeters. My head circumference is 55 centimeters. My hand span is 20 centimeters. I hope to hear from you soon.

Hunter

Hi,

My name is Lena. I am 8 years old. I like to play "Red, White, and Blue". My favorite things are cats and dolls.

I can read a centimeter ruler. My height was 133 centimeters. My arm span was 121 centimeters. The lengthof one of my steps was 38 centimeters. My wrist circumferencewas 5 centermeters. My head circumference was 51 centimeters. My hand span was 19 centermeters. I hope to beyour friend.

Lena

Hi,

My name is Jessica. I'm 9 years old. I like tv.,boats, softball, math,flowers, and reading books. Myfavorite things are the Tar Heels basketball team. My forite colors are green and red.

My body was easy to measure. My height is 134 centimeters. My arm span is 134 centimeters. My lengthof one step is 50 centimeters. My wrist circumference is 14 centimeters. My hand span is 17 centimeters.

Your friend,
Jessica

Hello,

My name is Katrina. I an nine years old. I am interested in forwheelers. I am interested in house dogs, and cats. I am interested in cooking. I am interested in going on a trip with my family. My favorite food is pizza. My favorite coloris purple. My favorite thing is going to the swimming pool.

I measured my body. My heigth is 133 centimeters. My arm span is 126 centimeters. My length of one step is 42 centimeters. My wrist curcumference is 11 centimeters. My head circumference is 54 centimeters. My hand span is 18 centimeters.

Your friend,
Katrina

Hi,

My name is Johnny. I am 8 years old. My interestes are airplanes, cars, birds, and deer. My favorite things are winter and summer. My favorite color is blue.

I like to use centimeters. My height is 143 centimeters. My arm span is 137 centimeters. My wrist circumference is 45 centimeters. My head circumference is 54 centimeters. My hand span is 16 centimeters.

Your friend,
Johnny

Hello,

My name is josh. I am 8 years old. I like to run, jog, walk, race, ride and go somewhere. My favorite things are cows, sheep, hogs, dogs, cats, and horses.

Here are some things about me. My height is 123 centimeters. My arm span is 132 centimeters. My lenght of one step is 57 centimeters. My wrist circumference is 4 centimeters. My head circumference is 51 centimeters. My hand span is 17 centimeters.

Your friend,
Josh

Hi,

My name is Matthew. I am nine years old. I like to watch tv.and read books. I like to hunt and fish. My favorite things are werewolf books, World War II books, and aircraft books.

I wanted to share my body measurements. My height is 160 centimeters. My arm span is 154 centimeters. The length of one of my steps is 100 centimeters. The circumference of my head is 57 centimeters. My wrist circumference is 19 centimeters. My hand span is 21 centimeteres.

Sincerely,
Matthew

Hi,

My name is Jason. I am 9 years old. I am interested in math, spelling, and science. My favorite animals are dogs, tigers, and elephants.

I measured my body parts. My height is 141 centimeters. My arm span is 114 centimeters. My length of one step is 81 centimeters. My wrist circumference is 13 centimeters. My head circumference is 15 centimeters. My hand span is 118 centimenters.

A freind,
Jason

Hi,

My name is Lauren. I am 8 years old. I like flowers and the colors navy blue and green. Ilove to go skiing and I like American Dolls and cats too! I like football too!

I wanted to tell you some of my body lengths. My height is 142 centimeters. My arm span is 115 centimeters. My length of one step is 88 centimenters. My wrist circumference is 19 centimenters. My head circumference is 55 centimenters. My hand span is 19 centimenters.

Your friend,
Lauren

Hi,

My name is Crystal. I am 8 years old. My interests are pro-basketball, nintendo, and Super Mario Brothers 3. I like to help people.

I am 140 centimeters in height. I am 135 centimeters in arm span. I have 47 centimeters lenght in one step. I am 14 centimeters in my wrist circumference. I am 55 centimeters in my head circumference. I am 15 centimeteers in my hand span.

Your friend,
Crystal

Hi,

My name is Natasha. I am 8 years old. My interests are science, math, spelling, reading and social studies. My favorite things are apples, ice cream, water, and milk.

I measured many parts of my body. I am 139 centimeters. My arm span is 122 centimeters. My length of one step is 47 centimeters. My wrist circumference is 55 centimeters. My hand span is 15 centimeters.

Your friend,
Natasha

Title: Endangered Species

Author: Linnea Miller

School: Glade Creek Elementary

Address: 32 Glade Creek School Road
Ennice, NC 28623

Phone Number: (910) 657-3388

Subject Area: Science

Grade Levels: 3

Time Required: 1/3 hours each student

NC Standard Course of Study Goals:

Science 5.1

Background Information/Pre-Lesson Instructions:

To determine the interdependence of plants and animals.
Students must be familiar with endangered species.

Materials/Equipment/Technology:

Access to the Internet/Netscape or World Wide Web or Gopher.

Instructional Strategies/Procedures:

Purpose: Investigate the interdependence of animals.

Students will investigate the interdependence of animals in particular ecosystems. Through the use of a Netscape search engine, the students will locate information from the World Wide Web and report on a specific endangered species.

1. After an introduction about endangered species the student will choose one particular endangered species. A list of endangered species may be found at **http://www.fws.gov/cgi-bin/imagemap/homescrn** (species-vertebrate-mammals) or **http://nceet.snre.umich.edu/EndSpp/MV.a.html**
I used mammal as my target group, but you could choose any group of animals or plants.

2. From Netscape students select Infoseek and types in their specific endangered species. After the students have found at least two sources of information they are to record the information on their record sheet.

3. Students will then read this information for an oral report. They may also find sounds or pictures for this report.

ENDANGERED SPECIES REPORTS

Student's Name ____

Endangered Species ____

Common Name ____

Historic Range ____
____

atus ____

Reasons this species became endangered
____
____
____
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____

Student Evaluation:

Follow-Up Activities:

Suggestions for Replication:

Title: Sites to Visit

Author: Linnea Miller

School: Glade Creek Elementary

Address: 32 Glade Creek School Road
Ennice, NC 28623

Phone Number: (910) 657-3388

Subject Area: Science

Grade Levels: 3

Time Required:

NC Standard Course of Study Goals:

Science Objective 5.6

Background Information/Pre-Lesson Instructions:

URL: 5 A Day Homepage **http://www.dole5aday.com**

Materials/Equipment/Technology:

Computers, Internet access.

Instructional Strategies/Procedures:

This homepage promotes eating 5 fruits and vegetables a day. One of the activities is "Fun Stuff" which includes playing "5 A Day Game," visiting Bobby Banana and Barney Broccoli, and getting recipes from "Kids Fun Cookbook."

On March 12, March 13, and March 14 my students participated in a % A Day Virtual Classroom. The students were involved in discussions, quizzes, and voted for their favorite fruits and vegetables. This is an enjoyable age appropriate homepage.

Student Evaluation:

Follow-Up Activities:

Suggestions for Replication:

Title: Weather Graphs

Authors: Cheryl Davis

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown School Road
Hillsborough, NC 27278

Phone Number: (919) 732-6138

Subject Areas: Math, Science, Social Studies

Grade Levels: 3 or above

Time Required: At least one month

NC Standard Course of Study Goals:

Math: 1.3, 3.5,4.5, 4.6, 6,
Science: 1.1, 2.1, 2.3, 2.4, 2.5, 2.9, 5.4
Social Studies: 9

Background Information/Pre-Lesson Instructions:

Materials/Equipment/Technology:

Macintosh computer, Microsoft Works program, color printer, chart paper to graph daily.

Instructional Strategies/Procedures:

1. Introduce Microsoft Works software program and do simple spreadsheets using the program.
2. Introduce using the Internet...how to get up-to-date local weather information ...examples:
   http://www.acs.ncsu.edu/ **http://www.wral-tv.com**
   http://www.unc.edu/
3. Weekly Student Meteorologist pulls up the local weather information first thing each morning and presents it to the class.
4. Keep daily weather graph as a class on a posted chart. This can be as simple or complex as you choose, (example. 1. sunny, partly sunny, cloudy, rainy, snowy).
5. At the end of the month tally totals.
6. Use Microsoft Works to prepare spreadsheet for the month. This can be done individually or in pairs.

Student Evaluation:

Printed weather graphs and improvement in using Internet.

Follow-up Activities:

Graphs can be done each month and then compare monthly graphs.

Suggestions for Replication:

1. Decide ahead of time whether you will record weather for just school days or if you will include weekends and holidays.
2. Have Internet locations and spreadsheet steps posted near computers.

Title: Problem of the Week

Authors: Linda J. Kubik

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown School Road
Hillsborough, NC 27278

Phone Number: (919) 732-6138

Subject Areas: Math, Communications

Grade Level: 3-5

Time Required: Once a week during entire school year.

NC Standard Course of Study Goals:

All math goals in the curriculum will be covered at some time during the school year through a variety of problems presented.
The learner will use language for critical analysis and evaluation.
The learner will practice verbal communication of mathematical ideas to move toward the goals of the National Standards of Math.

Background Information/Pre-Lesson Instructions:

Problem-of-the-week is an on-going project. High school students in a classroom in Maryland upload the problems, collect answers, post responses each week, and monitor the project.

Materials/Equipment/Technology:

E-mail access, paper & pencil, math manipulatives available when needed to solve problems during the year.

Instructional Strategies/Procedures:

1. Teacher or students access the problem on-line at the beginning of each week.
2. Teacher presents problem to be solved during a class period or may be used as an extra problem for students to solve on their own.
3. Students write their answer and the method used to solve the problem.
4. Teacher or students send their answer via E-mail to the problem-of-the-week team.
5. Students access the answer and the solutions from other classes participating in the program around the world. All correct answers submitted are posted weekly by the high school class monitoring the program.

Student Evaluation:

Students get to see their math writing published when correct.
Students can monitor their own results against those of others.
Student motivation to tackle difficult problems can increase.

Follow-up Activities:

Class can discuss solutions or work as teams to solve problems.
Classes can create their own math problems to submit to the project.

Suggestions for Replication:

Classes may participate weekly or choose to participate on their own schedule. Problems can be pulled down and printed to be used at other times or when access to E-mail is limited. Solutions can be printed and shared when computer access is limited.

Title:	Milk Or Punch--What's for Lunch
Authors:	Brenda Hart
School:	Coopers Elementary
Address:	Route 2, Box 209-A Elm City, N.C. 27822
Phone Number:	(919) 937-5612
Subject Areas:	Math, Communications Skills, Computer Skills, Information Skills, Science
Grade Levels:	3-6

Time Required:

Daily recording 1-2 minutes for a week. 1 session of 45 minutes to teach simple form of database and to enter results of the survey. 1 session of 30-45 minutes to analyze and interpret the data.

NC Standard Course of Study Goals:

Mathematical Goals :

1. Learn how focus on the questions.
2. Understand the various ways of representing data.
3. Understand concept of mode and N.
4. Construct different types of graphs.
5. Use technology to aid in graphing.

6.1. Explain the kinds of decisions that need to be made in constructing graphs.
6.2. Systematically collect, organize, appropriately display and interpret data, both orally and in writing, using information from many content areas.
6.3. Explore increasingly complex displays of data, including multiple sets of data on the same graph--computer applications, and Venn Diagrams.
6.4. Use range, median, and mode as ways of describing a set of data and explore the use of statistics in science, social studies, and the media.

Computer Goals:

1. Learn to use a basic word processor.
2. Learn to create a simple database.
3. Learn to use a graphing program to print a variety of different types of graphs.

2.3. Use a word processor program to load, enter, save, and print text
Grade 5: 2.2 Identify database management terms (e.g., database, file, record, field/category, sort/arrange, select/search, report).

Grade 6: 3.2 Use a database to search for desired information, given one criterion, and given two criteria (using ìandî or ìorî connectors where necessary).

Information Skills:
1.4. The learner will relate ideas and information to life experiences.
1.5. The learner will communicate reading, listening and viewing experiences.

Science:
2.1. Demonstrate the ability to observe
2.4. Demonstrate the ability to communicate
2.7. Demonstrate the ability to predict
2.9. Demonstrate the ability to interpret data

Background Information/Pre-Lesson Instruction:

Pre:
1. Collect and distribute materials to students (sticky notes, etc.).
2. Format disk to use at the computer.
3. Make bulletin board for displaying students' findings.

With Students:
1. Review the PCAI Process.
2. Discuss data collecting.
3. Tell the class that this project will focus on math and computer activities.
4. Students will understand ways to collect data.
5. Students will collect real data.
6. Students will understand ways to appropriately record data.
7. Students will learn to analyze and interpret data.
8. Students will learn to create a database of the simplest form.
9. The student using a word processor will learn to summarize his/her activity and results.

Materials/Equipment/Technology:

Paper or sticky notes, pencils or pens for 5 days, graph paper, computer and word processing program, database program and graphing program, LCD panel or connection to large screen monitor, bulletin board.

Instructional Strategies/Procedures:

Activity:
1. Let students predict what beverage they think is drunk most.
2. Instruct each student to write his/her name and what they drink for lunch daily for 5 days.
3. At the end of the week students will begin to create a database with each student's name, grade, day of the week, and beverage he drank for lunch.

4. Provide a special observation and sharing time for students to discuss the results of their data collected per class.
5. Have students contribute by typing their summaries of their class findings.
6. Have students print and save a copy of their summaries.
7. Have students create and save their database and print different aspects of the database.
8. Using a graphing program enter data and print graphs for the class.

Student Evaluation:

Assess how well students interpret data collected.

Follow-up Activities:

1. Provide opportunities for 5th and 6th grade students to compile and create a database containing all the information from grades 3-6.
2. Using a graphing computer program, have students (after compiling data) print out their most popular beverage at lunch for a given week.
3. Provide for class discussion of why they think the different beverages were chosen: what is healthy and what's not.
4. Provide students an opportunity to keep a log, using the computer, of the findings and their interpretation of the results.
5. Provide time for class discussion of the mathematical processes of collecting, analyzing, and interpreting the data, mode, N, gaps, holes, shape of the data, etc.
6. With the computer, try making different types of graphs; bar, pie, line, box whiskers, and which would be the best to show the results of the data.
7. The group can draw conclusions from the data about the preferred lunch beverage.
8. Display a bulletin board in lunchroom to share results of the survey.

Suggestions for Replication:

Students can compare their findings with classes in other regions of the country or the world using the Internet and E-mail.

Title: Butterflies in Spring

Author: Sharon Davidson

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Areas: Reading and Science

Grade Levels: 3-6

Time Required: 1-2 hours

NC Standard Course of Study Goals:

Reading comprehension
Science - plants and insects

Background Information/Pre-Lesson Instruction:

Read and discuss general information about butterflies using World Book Encyclopedia or other reference sources.

Materials/Equipment/Technology:

Computer with Internet access. Activity sheet - one per student

Instructional Strategies/Procedures:

Butterflies in Spring

1. Open Netscape.
2. Select File (from the top menu) and highlight Open Location.
3. In the box, type: **http://mgfx.com/butterfly/** (Click Open)
4. You will see The Butterfly Website home page.
5. Scroll down and click on Butterflies in Education.
6. On the Butterflies in Education page, click on the different topics to read about the projects various schools are doing that relate to butterflies. For example:
   Click on "Cool School Zoo"
   Read the information about George D. Steckle Elementary School.
   Click on the Back key to read about another school.
7. To exit the Butterflies in Education page, click on the Back key.
8. Scroll up and click on Landscaping for Butterflies.
9. Click on Planting Guide.

10. Scroll through the Butterfly Website Planting Guide page to read about the different types of plants to which butterflies are attracted. You may enlarge any picture by clicking on it. (Click the Back key after viewing any enlarged picture).
11. To exit the Butterfly Website Planting Guide page, click on the Back key. Click on the Back key again.
12. Scroll down and click on Picture Galleries.
13. Click on Gallery I. You will see The Butterfly Website Picture Gallery I page. Read the information about each butterfly on the page. You may enlarge any picture by clicking on it. (Click the Back key after viewing any enlarged picture).
14. To exit the Gallery I page, click on the Back key. Follow the same procedures listed in directions 13 and 14 above to view the other galleries listed on the Butterfly Website Picture Galleries page.
15. To exit the Butterfly Website Picture Galleries page, click on the Back key.
16. Select File (from the top menu), then Quit, or choose from the extension activities listed below.

Student Evaluation:

Quality of student work and participation will be assessed.

Follow-up Activities:

Use the Butterfly Website homepage to complete the following suggested activities.
1. Click on Attention Live Specimen Collectors to read about the laws relating to the transportation of butterflies.
2. Click on Articles and Other Information. Click on Butterfly Business Takes Off to read about how one person makes a living raising butterflies.
    Click on How to Spread Butterflies to learn how to properly mount a butterfly's wings in a display case.
    Click on The Ideal Recycled Butterfly Rearing Chamber to learn how to raise butterflies in a soft drink bottle or margarine container.
    Click on Inviting Butterflies to Your Wedding to read about the trend of releasing butterflies at weddings instead of throwing rice.
    Click on any of the following topics to read specifically about monarch butterflies: Monarch Migration, Monarch Parasite Alert. Monarch Population Plummets in Mexico, Monarchs and Watermelon, Shamokin Area Students Send "Ambassadors" to Warmer Climates.
3. Click on Raising Your Own Butterflies to learn how to raise butterflies for fun and profit.
4. Click on Past Visitor Comments to read some of the comments made by website visitors. You may write your own comment by clicking on Guest Book.
5. Click on Public Butterfly Gardens. Scroll down to the list under USA. Write down the name and address of the butterfly garden nearest to you. (You may want to write a letter requesting additional information).

6. Click on Other Internet Resources to locate additional resources on the Internet that relate to butterflies.
7. Click on General Store to find educational materials relating to butterflies.
8. Students can create a butterfly garden at school using the directions and information found on this homepage. Click on Butterflies in Education and Landscaping for Butterflies for ideas.
9. Click on General Store. Click on Kits and Curricula. Order butterfly hatching kits for yourself or for your classroom using the information found on this page.
Combine Activities 8 and 9.

> Create a butterfly garden at your school, order caterpillars and hatch them into butterflies. Release the butterflies in your school garden on a special "Garden Dedication Day."

10. Scroll to the bottom on the Butterfly Website homepage. Click on Butterfly Contest. Follow the contest rules for submitting your artwork, poems, or stories.

Suggestions for Replication:

Share with other appropriate grade levels

Title: The Mixed Up Files of Mrs. Basil E. Frankenweiler

Author: Linda J. Kubik

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown School Road
Hillsborough, NC 27278

Phone Number: (919) 732-6138

Subject Areas: Communication, Reading; Writing, Math and Map Skills

Grade Level: 3 - 6

Time Required:

This activity takes 2-3 class periods to complete after the book is read. (Time will vary depending upon computer access time.)

NC Standard Course of Study Goals:

Communication, Reading and Writing
Goal 2: The learner will use language for the acquisition, interpretation, and application of information.
Goal 3: The learner will use language for critical analysis and evaluation.
Goal 4: The learner will use language for aesthetic and personal response.
Comprehension: The learner will construct meaning from literary, informational, and practical texts.
Composing Products: The learner will write informational and practical texts to convey meaning, to learn, and to clarify thinking.

Math and Map Skills
Goal 5: The learner will solve problems and reason mathematically.
Goal 3: The learner will read a map and locate specific locations.

Background Information/Pre-Lesson Instructions:

This activity can be used at a variety of grade levels depending on instructional reading level of the students you are working with. The book is listed at the 5.8 reading level. Students should have completed at least 1/3 of the novel before beginning the activities.

Materials/Equipment/Technology:

Copies of the novel, paper & pencil (or recording sheet prepared by teacher), access to Metropolitan Museum of Art World Wide Web Page.

Instructional Strategies/Procedures:

1. Students will compare the maps of the Metropolitan Museum of Art in New York City as shown on the World Wide Web Page (**http://www.metmuseum.org/**) with the maps of the museum as printed in the book published in 1968 by carrying out the following activities. Locate the following places on the museum maps and list the floor and letter where these places can be found:
    a. Where did Jamie and Claudia sleep?
    b. Where did Jamie and Claudia hide from the guards until closing time?
    c. Where could the children eat a meal?
    d. Where did Jamie and Claudia enter the museum and be counted?
    e. Where do you think the children's museum is located?
2. Students will solve a practical math problem the children faced in the novel with the following activity: Find the list of restaurants the museum has today. In which restaurant could Claudia and Jamie afford to eat? Why?
3. Students will explore the museum on the Internet and respond in writing to the following questions related to the novel they have read:

    Decide in what part of the museum you would want to hide and use a sheet of notebook paper to write a paragraph. Tell me where you would hide and why you would hide there. Would your choice be better than Claudia's choice? Explain why?

Student Evaluation:

1. Students' accuracy in map reading will be monitored.
2. Students' problem solving will be checked by their ability to locate the most inexpensive restaurant.
3. Students' writing skills and ability to relate their reading to their own feelings and experiences will be demonstrated in their choices and explanations.
4. Students will practice locating specific information found in a location on the World Wide Web.

Follow-up Activities:

Students may make drawings of their ideas. Our class prepared a Hyper Studio Stack to illustrate our answers. Students could visit an Art Museum and compare it to the Metropolitan.

Suggestions for Replication:

Students can work in pairs to explore the museum on the World Wide Web. If you have limited access to the Internet, the map pages can be printed out and used for the comparison activity. This is also true for the restaurant list. Student time at the computer can then be spent on touring the museum to find a hiding place.

Title: TEL-IT

Authors: Brenda Hart & Karen Creech

School: Coopers Elementary

Address: Rt. 2, Box 209- A
Elm City, N.C. 27822

Phone Number: (919) 937-5612

Subject Areas: Communication Skills, Math, Science, Social Studies, Music, Computer, and Guidance

Grade Levels: 3-6
(Could be adapted for Middle and Secondary)

Time Required: School Year

NC Standard Course of Study Goals:

Music:
Goal 1: The learner will develop positive attitude in music toward self and others.
1.1.1: Perform with confidence.
1.4.1: Cooperate with others in making and receiving music.
1.6.1: Successfully complete musical assignments for activities.
Goal 2: The learner will develop concepts of music: melody, rhythm, tempo, dynamics, tone color, harmony, and form.
2.3.1: Recognize and perform canons, rounds, and polyphonic music.
Goal 3: The learner will develop creative capabilities, concepts, and skills.
3.1.1 Become involved in the creative process-- show willingness to take risks in exhibiting ideas and contributions to class.
3.6.1 Create songs, either by plan or spontaneously.
Goal 4 : The learner will develop skills in music, singing, rhythms, listening, instrumental performance, analysis, evaluation, conducting music, reading and physical coordination.
Goal 4.2.1: Sing comfortably and accurately within natural range of her/his voice.
Goal 4.3.1: Sing equally well with or without accompaniment.
Goal 4.4.1: Blend with group when singing.

Math
Grade 4
Goal 6: The learner will demonstrate an understanding in the use of graphing, probability, and statistics:

6.1 Collect, organize, and display data from surveys, research, and classroom experiments, including data collected over a period of time. Include data from disciplines such as science, physical education, and social studies.
6.2 Formulate questions and interpret information orally and in writing, including main idea, from charts, tables, tallies and graphs (bar, line, stem and leaf, pictographs, circle).
6.3 As a group, display the same data in a variety of ways; discuss advantages and disadvantages of each form, including ease of creation and purpose of graph.
6.4 Explore range, median, and mode as ways of describing a set of data.
6.5 Name the ordered pair of a point on a grid; plot positions named by ordered pairs on a coordinate grid.
6.6 Use ordered pairs in a variety of engaging situations.

Grade 5
6.1 Explain the kinds of decisions that need to be made in constructing graphs.
6.2 Systematically collect, organize, appropriately display and interpret data both orally and in writing using information from many content areas.
6.3 Explore increasingly complex displays of data, including multiple sets of data on the same graph, computer applications, and Venn Diagrams.
6.4 Use range, median and mode as ways of describing a set of data and explore the use of statistics in science, social studies, and the media.
6.6 Plot points that represent ordered pairs of data from many different sources such as economics, science experiments, and recreational activities.

Grade 6
6.1 Create and evaluate graphic representations of data, including circle graphs.
6.2 Use measures of central tendency (mean, median, and mode) range to describe meaningful data; compare two sets of unequal data.
6.3 Display data using computer software and explore the use of spreadsheets.

Science
Grades 4-6
Goal 1: The learner will understand the nature and relationship of science to human endeavor.
1.1 Know that science is a way of finding out through observation and experimentation.

Grade 4
Goal 4: The learner will have a general understanding of the earth's atmosphere, weather, and climate.
4.1 Know about weather and climate.

Grade 5

Goal 3: The learner will have an understanding of energy, especially heat.

3.7 Know how to measure temperature.

Computer Skills:

Grade 4-6

Goal 1: The learner will understand important issuers of a technology-based society and will exhibit ethical behavior in the use of computer technology.

Goal 2: The learner will demonstrate knowledge and skills in using computer technology.

Goal 3: The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.

Guidance

Grade 4-6

Goal 3: The learner will demonstrate responsible social skills and an understanding and application of being a contributing member of society by being able to:

Grade 4

3.1 Develop effective interpersonal relationships.

Grade 5

3.1 Demonstrate competencies and skills for interacting with others.

3.2 Demonstrate an awareness that all persons have the need to belong and be accepted by others.

Social Studies

Grade 4

Goal 3: The learner will locate major physical features and suggest the influence of location on life in North Carolina.

Goal 4: The learner will assess the significance of physical and cultural characteristics of regions within North Carolina and the regions of which North Carolina is part.

Goal 7: The learner will judge how well economic, social, and political institutions help the people of North Carolina meet their needs.

Goal 11: The learner will assess changes in ways of living over time and investigate why and how these changes occurred.

Communication Skills

Goal 1: The learner will use strategies and processes that enhance control of communication skills development.

1.1 The learner will apply preparation strategies to comprehend or convey experiences and information.

1.2 The learner will apply engagement strategies to comprehend or convey experiences and information.

1.3 The learner will apply response strategies to comprehend or convey experiences and information.
Goal 2: The learner will use language for the acquisition, interpretation, and application of information.
2.1 The learner will identify, collect, or select information and ideas.
2.2 The learner will analyze, synthesize, and organize information and discover related ideas and concepts, or generalizations.
2.3 The learner will apply, extend, and expand on information and concepts.
Goal 3: The learner will use language for critical analysis and evaluation.
3.1 The learner will assess the validity and accuracy of information and ideas.
3.2 The learner will determine the value of information and ideas.
3.3 The learner will develop criteria and evaluate the quality, relevance, and importance of the information and ideas.

Background Information/Pre-Lesson Instruction:

Make contact with the teacher from the other school.
Pair up with partners (girl-girl), later switch.
Teachers will make list and identify strengths and weakness of the students and pair homogeneously.

Materials/Equipment/Technology:

Computer, Internet connection, video camera, video tapes, fabric, newsprint, camera, slide film.

Instructional Strategies/Procedures:

Make contact with the teacher from the other school
Video taping at the beginning of the first contact/slide pictures
Students will write personal descriptive narratives
Student will send by E-mail personal narratives
Students will brainstorm in cooperative groups to arrive at clues to geographic location, region, county; most relative clue first--absolute last.
Students will collect data, record, interpret and analyze variances in temperature and rainfall comparing and contrasting local and state levels.
Interview appropriate persons to obtain information for historical facts of their state and community.
Students will analyze, interpret, and synthesize the information received from the contact school.
Students will collect, organize, display, construct graphs to record rainfall and temperature data for a month through electric process, sharing this information through telecommunications.
Students will publish their first newspaper recording all information and exchange with the contact school.

Through collaborative efforts students will organize a joint "colony" and create/ select symbols expressive of it. Examples of presentations for this effort would include: a) flag, b) song, c) motto, d) flower, e) bird, f) dance, g) pamphlet.
Students will construct a map of their colony giving latitude and longitude, land features, bodies of water, relative and absolute locations.
At various intervals students will publish newspapers, depicting school events and activities
Students will create cards to share with each other on various holidays.

Student Evaluation:

Learner will use the complete writing process.
Will understand important issues of technology-based society and will exhibit ethical behavior in use of computer technology.
Learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.
Learner will gain literal information from visuals.
Will use visual information to help think critically.
Create a visual message from a piece of writing.

Follow-up Activities:

Use as a stepping stone to school-wide participation.

Suggestions for Replication:

This project could be broken into smaller parts.

INTERNET WEATHER PROJECT

BY Katye Alford
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PURPOSE:

This is a cross curriculum project that incorporates the Information Skills, Computer Skills, Math, Science, Social Studies, and Communications. The purpose of this project is for the students to learn that weather varies from place to place. They will also learn about weather patterns and will become more aware of the changing weather. They will learn to use math and science concepts to collect and study weather data; Information and Computer skills to send, receive, and analyze data; Social Studies Skills to relate the data to real people and real life situations; and Communications Skills will be used in all the activities.

Students will learn about the changing things that contribute to the changing weather such as the tilt of the earth, changing seasons, sunrise and sunset.

Students will learn that their home is not an isolated place but a part of the world and that weather moves from one place to another. They will become aware of the changes in people' s lives that are caused by the weather. They will become aware of the fact that the ways people live are directly related to the weather in a place. Those ways are different in different places and yet are much the same.

Students will learn to find places on maps using coordinates and clues. They will map the places in the project and mark them on maps. Bar graphs, line graphs, and time lines will be made. Temperatures will be recorded.

Students will learn that computers and the Internet can be important tools in their lives for research and as links to the world that are personal and real life.

GETTING STARTED

Plan this project for a time when the weather for YOUR area will be changing quickly, such as spring or fall. If you are going to do the plan for tracking the 12 Hour day and night you need to plan it to begin a few weeks before and end a few weeks after the date of YOUR 12 hour day. That is also a time when you should have pretty rapid change.

Locate other schools from as many different areas as possible. You can do this by subscribing to the Newsgroup Kidsphere or others and send out a message that you are looking for schools to participate in a project. Give some fairly specific information about the project and the timeline for it. Send this out AT LEAST 2 months before you want to begin. It takes a while to get your responses and get them organized.

This can be a very hard to manage project. The lead teacher (YOU) will have to manage all the data sent by the schools because it needs to be exchanged with everyone, not just you. When I did it, I had about two dozen schools in all parts of the US and many in Canada. That was too many to manage. When I do this again I will limit it to no more than ten. Try to get someone as near a pole as possible and then work from there toward the equator. If you get a very large number then you could divide them into groups. Try to get a VERY FIRM COMMITMENT. People on the Internet are notorious for signing up for projects, getting overloaded, and then not following through. That is a disaster for your students assigned to that class.

Each week on a prearranged date everyone will send their information. This can be handled two ways.
1. It can all be sent to you. You go into your E-mail under nicknames and set up a group with all the participants in it and give it a nickname. Start a New Message. Put the nickname as the address; and, as the reports come in, cut and paste each one to your new message. Add your own report. Send it and the nickname sends it to everyone you entered into the nickname file and you don't have to type all the addresses each time. You need to do this the same day or no later than the next that you get the reports. In the upper grades students probably could do this.
2. Each participant could set up a nickname file and enter the addresses for everyone in their exchange group. Each week they follow the instructions above for sending to a nickname and their information would automatically go to everyone in their group. That is what I will do the next time I do this.

PROCEDURE FOR PROJECT

1. Choose a certain day of the week that data will be collected and then a day for reporting. This can be the same day.
2. Report the temperature for your school at 8:30 AM and at 2:00 PM or as near as you can manage. If you change classes you might have older students collect this on their own before coming into the school in the morning or something. This is important to do so the students can see that the temperature usually rises in the day. Why? SOMETIMES IT GOES DOWN IN THE DAY. Why?
3. Report the sunrise and sunset if you are doing this portion of the project. Collect this by watching the TV weather report at school on the weather channel or by finding a weather site on the computer.
4. Report the general weather conditions.
5. If something interesting went on since the last report, please tell about it. Ex. snowstorm, tornado, etc.
6. Please share the activities going on at your school such as weather related activities, holiday celebrations, festivals, school activities, or anything that the students would find interesting and that could be used to compare schools and places.

SUGGESTED ACTIVITIES

1. Double line graphs to track sunrise and sunset for a place over a period of time. See the lesson plan attached.
2. Record daily high and low temperatures for a group of places. See attached lesson plan.
3. Locate and mark positions on desk and large class maps. Use latitudes and longitudes if children are old enough to grasp it. See attached lesson plan.
4. Write descriptive weather words about your home each week. Use them when sending the report to other schools.
5. Make class symbols for rain, snow, etc. and place these weekly on the weather maps. See attached plan.
6. Chart the hours of daylight for the places. This can be a continuing activity and makes a good line graph.
7. Some weeks, or weekly, make bar graphs showing the temperatures for each place reporting.
8. Set up a classroom weather center with weather tools that you want to use.
9. Set up an outdoor weather station if you don't have one. This is a good grant project.
10. Make a class scrapbook about the places and add the reports to it each week.
11. Each week fill out a WHAT'S HAPPENING sheet listing the activities reported by each place. Compare to what's going on in your area. Write or discuss why they might be the same or different. Ex. Same holiday, different customs.
12. List the signs of Spring/Fall and chart in a way to show that they come to the Southern Places first and gradually move north. Discuss or Write why that might be so.
13. Discuss or write predictions for the weather for a place. Why do you think that?
14. Discuss or write whether the predictions came true and why that might be.
15. Discuss or write comparisons of the weather or activities for a place distant from you or for a place near you. Sometimes places near you can have very different weather. Why?
16. After becoming familiar with the locations, watch the weather with the class daily for a week and note the daily changing patterns and discuss how their friends in the different places might be getting along. This is particularly good to do if it is a week of dramatic weather.
17. Make time lines for the weeks that will be in the project.
18. Your students might be interested in forming key pals with students in the places studied. Try to get a few in each location. That would really personalize the events that happen. It becomes especially real when there is a tornado, flood, etc. in one of the places you are studying and the students feel a personal involvement with the happening and get firsthand information about it.

TRACKING SUNRISE AND SUNSET

By Katye Alford
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Use alone or as part of the larger weather project.

INFORMATION SKILLS

Goal 1-The learner will experience a wide variety of reading, listening, and viewing resources to interact with ideas in an information-intensive environment.

Goal 2-The learner will identify and apply strategies to access, evaluate, use, and communicate information for learning, decision-making, and problem-solving.

COMPUTER SKILLS

Goal 1-The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer technology.

Goal 2-The learner will demonstrate knowledge and skills in using computer technology.

Grade 5 and all grades above.

Goals 1 & 2 above.

Goal 3-The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.

MATH

Third Grade:

Goal 3-The learner will demonstrate an understanding of classification, pattern, and seriation.

Goal 4-The learner will understand and use standard units of metric and customary measure.

Goal 6-The learner will demonstrate an understanding of data collection, display, and interpretation.

Grade 4 & 5 & 6 &7 & 8:

Goal 3-The learner will demonstrate an understanding of patterns and relationships.

Goal 5- The student will solve problems and reason mathematically.

Goal 6-The learner will demonstrate an understanding and use of graphing, probability, and statistics.

Advanced Math

Goal 1-The learner will model real-world phenomena using techniques of data analysis.

Goal 2-The learner will graph, transform, use as mathematical models, and compose basic functions.

SCIENCE:

Grades All
Goal 1-Science is public and probabilistic
Goal 2- Observe, Use numbers, Communicate, Measure, Infer, Predict, Use space-time relations, Interpret data, Define operations, Formulate Hypothesis

Grade 3:
Goal 5-Earth Cycles

Grade 5:
Goal 5-Weather and Climate

Grade 6:
Goal 6-Interaction of sun, earth, moon, and planets

Grade 7:
Goal 6- 6.2 Weather, 6.3 Motion

High School:
Earth Science-10.1 Earth-sun system

SOCIAL STUDIES:

3rd Grade:
Goal 2-The learner will infer that individuals, families, and communities are and have been alike and different.
Goal 6-The learner will evaluate change in different settings.
Goal 8-The learner will apply basic geographic concepts and terminology.
Goal 9-The learner will apply geographic themes to communities.

5th Grade:
Goal 5-The learner will evaluate ways the people of the Western Hemisphere use, modify, and adapt to the physical environment.

Grade 6 & 7 if you can get some contacts in the countries you study.

Time Required:

Up to participants. I would plan this for several weeks before and after the date when YOU will have an exact 12 hour day and night in the spring or fall.

Learning Outcomes:

The learners will observe the way the hours of daylight and night change as the earth changes its tilt. They will also observe that this varies each day for different locations according to the location in relation to the pole.

Background:

This can be done as an individual project or as part of a larger weather project. I designed and used it as part of a larger weather project. The times of sunrise and sunset were one part of the information we exchanged. An exchange of social data as well as facts will give this more meaning and correlate it to the social studies objectives. When we got our contacts, the first thing we did was find the places on maps, chart them onto our own maps, and discuss their locations in relation to the poles and important land and water forms. We made predictions as to how we thought the locations, the changing day and night times, and the landform factors would affect the residents' daily lives and activities. The students also should have some pre-instruction in plotting points on a line graph.

Materials:
Computers with Internet service, TV, blank line graphs set up so that double graphing can be done on them. The graph needs a lot of vertical space (a 1 cm graph works pretty well) and enough spaces across the bottom for all your weeks, and colored marking instruments.

Procedure:
1. This can be done in groups or individually depending on the ability of your students and on how many schools participate in the project.
2. Locate other schools from as many different areas as possible. You can do this by subscribing to the Newsgroup Kidsphere or others and send out a message that you are looking for schools to participate in a project. Give some fairly specific information about the project and the timeline for it. Send this out AT LEAST 2 months before you want to begin. It takes a while to get your responses and get them organized.
3. Do your mapping or whatever you intend to do as background instruction after you get your participants.
4. The teacher needs to research and discover the date of the 12 hour day for their location and exchange this information. That information should be kept secret from the students. You need it to know how many spaces on the side each graph will need.
5. One or more graphs will be done for each location.
6. Set up the graphs: Put title Etc.,
7. Each week, on the arranged day, students watch the weather report on TV or you could use the computer and find a weather site on it. They record the reported time of sunrise and sunset for that day. Send the message to the other participants. Also send information about activities and changes that took place that week.
8. Each week record the date on the bottom of the graph, the sunrise and sunset times on the side. The sunrise should begin on the top line and will go downward each week. The sunset will begin on the bottom and go upward each week. Plan these graphs so that the line in the middle will be the meeting place for the sunrise and sunset for your location. The sunrise line should be plotted and added to weekly in one color and the sunset in a different color. The students will observe that the two lines move toward each other, cross on the 12 hour day, and move in opposite directions as the amount of day and night move apart again.

The 12 hour day will not be the same for all locations so when a location gets to the week when they should have the 12 hour day, make sure you exchange data that day even though it may not be your regular reporting day.
9. Weekly discuss how the changing amount of daylight affects the climactic changes in each location and how those changes affect the lives and activities of the people living there.

Evaluation:
Teacher observation of the growing knowledge of the students and their discussions.
The graphs can be graded.
A discussion type test could be given by asking the students to write a paragraph, essay, etc. telling what they learned.

Suggestions:
This can be a very hard to manage project. The lead teacher (YOU) will have to manage all the data sent by the schools because it needs to be exchanged with everyone, not just you. When I did it, I had about two dozen schools in all parts of the US and many in Canada. That was too many to manage. When I do this again I will limit it to no more than ten. Try to get someone as near a pole as possible and then work from there toward the equator. If you get a very large number you could divide them into groups. Try to get a VERY FIRM COMMITMENT. People on the Internet are notorious for signing up for projects, getting overloaded, and then not following through. That is a disaster for your students assigned to them. Each week on a prearranged date everyone will send their information. This can be handled two ways.
1. It can all be sent to you. You go into your E-mail under nicknames and set up a group with all the participants in it and give it a nickname. Start a New Message. Put the nickname as the address and as the reports come in cut and paste each one to your new message. Add your own report. Send it and the nickname sends it to everyone you entered into the nickname file and you don't have to type all the addresses each time. You need to do this the same day or no later than the next that you get the reports. In the upper grades students probably could do this.
2. Each participant could set up a nickname file and enter the addresses for everyone in their exchange group. Each week they follow the instructions above for sending to a nickname and their information would automatically go to everyone in their group. That is what I will do the next time I do this.

WHAT'S THE TEMPERATURE

By Katye Alford
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919-937-5612

For use alone or as part of a larger weather project.

INFORMATION SKILLS

Goal 1-The learner will experience a wide variety of reading, listening, and viewing resources to interact with ideas in an information-intensive environment.

Goal 2-The learner will identify and apply strategies to access, evaluate, use, and communicate information for learning, decision-making, and problem-solving.

COMPUTER SKILLS

Goal 1-The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer technology.

Goal 2-The learner will demonstrate knowledge and skills in using computer technology.

Grade 5 and all grades above.

Goals 1 & 2 above.

Goal 3-The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.

MATH

Third Grade:

Goal 3-The learner will demonstrate an understanding of classification, pattern, and seriation.

Goal 4-The learner will understand and use standard units of metric and customary measure.

4.6 Read Celsius and Fahrenheit thermometers; relate temperatures to everyday situations.

Goal 6-The learner will demonstrate an understanding of data collection, display, and interpretation.

Grade 4 & 5 & 6 &7 & 8:

Goal 3-The learner will demonstrate an understanding of patterns and relationships.

Goal 4-The learner will understand and use standard units of metric and customary measure.

Goal 5- The student will solve problems and reason mathematically.

Goal 6-The learner will demonstrate an understanding and use of graphing, probability, and statistics.

Advanced Math

Goal 1-The learner will model real-world phenomena using techniques of data analysis.
Goal 2-The learner will graph, transform, use as mathematical models, and compose basic functions.

SCIENCE:

Grades All
Goal 1-Science is public and probabilistic
Goal 2- Observe, Use numbers, Communicate, Measure, Infer, Predict, Use space-time relations, Interpret data, Define operations, Formulate Hypothesis, Control Variables, Measure.

Grade 3:
Goal 5-Earth Cycles

Grade 5:
Goal 5-Weather and Climate

Grade 6:
Goal 6-Heat, Light, and Sound

Grade 7:
Goal 6- 6.2 Weather,

SOCIAL STUDIES:

3rd Grade:
Goal 2-The learner will infer that individuals, families, and communities are and have been alike and different.
Goal 6-The learner will evaluate change in different settings.
Goal 8-The learner will apply basic geographic concepts and terminology.
Goal 9-The learner will apply geographic themes to communities.

5th Grade:
Goal 5-The learner will evaluate ways the people of the Western Hemisphere use, modify, and adapt to the physical environment.

Grade 6 & 7 if you can get some contacts in the countries you study.

OUTCOMES:

The learners will observe that temperatures vary greatly on a given day from place to place. They will learn that this is affected by location in relation to the poles, nearby land and water forms, and the changing of the tilt of the earth. Students will learn to communicate through the Internet. They will learn that they are not isolated but part of a world system. They will learn how people live in relation to their weather. How many of these outcomes you have will depend on whether you use this plan in isolation or as part of the larger weather project.

Background:
As soon as you get your exchange sites set up, the students should find the locations on maps and plot the locations on personal and class maps. Discuss the proximity of the locations to the poles and to dominant land and water masses. Make predictions as to how they think all those things will affect the changing temperatures of the places.

Materials:
1. Graphs with thermometers drawn on them in pairs. There should be one pair for each week that you plan for the project to last. There is a perfect graph for this made by AIMS in the book, Seasoning Math and Science Fall & Winter, 2nd Grade, p. 33. Upper grade teachers shouldn't dismiss this as too elementary. It is a very nice graph that has ten pairs of thermometers drawn on it. The only thing you need to do is white out the days of the weeks written above each pair and your students will replace that information with the dates of your reports.
2. Computers with Internet access.
3. Outside thermometer.

Time Required:
Several weeks. If doing as part of a larger project, it would follow that time line.

Procedures:
1. This can be done in groups or individually depending on the ability of your students and on how many schools participate in the project.
2. Locate other schools from as many different areas as possible. You can do this by subscribing to the Newsgroup Kidsphere or others and send out a message that you are looking for schools to participate in a project. Give some fairly specific information about the project and the timeline for it. Send this out AT LEAST 2 months before you want to begin. It takes a while to get your responses and get them organized.
3. Do your mapping or whatever you intend to do as background instruction after you get your participants.
4. One graph will be done for each location.
6. Set up the graphs: Put title Etc.,
7. Each week on the designated day, your students will go outside as early in the morning as you can manage it and check the temperature. If you have an outside weather station, they could do this before coming inside as they arrive at school. As late in the day as possible, check the temperature again. The schools participating should agree on the times and each one do it as near to the same times as possible in their situation. My groups did it at 8:30 AM and 2:15 PM. Discuss controlling variables with students. You may do this in Celsius or Customary or both. I do both.
8. Make your report of the temperature and other information you might be exchanging to the participating schools. Report events and weather related activities and happenings.

9. Receive reports from the other schools.
10. Graph the results you receive from each school weekly.
11. Discuss the social data received and compare it to life in your community that week.
12. Discuss how life in each community is changing as the weather changes.

Evaluation:
Observation of students
Grading of the graphs
Essay questions concerning the things discussed such as how the lives in a given community changed as the weather changed and what was the relationship.

Suggestions:
1. Choose a time to do this project when the weather will be changing quickly in YOUR area from one season to another. The children will see that everyone else's changes are not the same as yours at that particular time. If doing this project as an entire unit with the LENGTH OF DAY AND NIGHT PROJECT then you would do this for a few weeks before the 12 hour day/night in YOUR area and after that date. That would be spring and fall and should be your most dramatic weather changes.
2. This can be a very hard to manage project. The lead teacher (YOU) will have to manage all the data sent by the schools because it needs to be exchanged with everyone, not just you. When I did it, I had about two dozen schools in all parts of the US and many in Canada. That was too many to manage. When I do this again I will limit it to no more than ten. Try to get someone as near a pole as possible and then work from there toward the equator. If you get a very large number then you could divide them into groups. Try to get a VERY FIRM COMMITMENT. People on the Internet are notorious for signing up for projects, getting overloaded, and then not following through. That is a disaster for your students assigned to them.

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1. It can all be sent to you. You go into your E-mail under nicknames and set up a group with all the participants in it and give it a nickname. Start a New Message. Put the nickname as the address; and, as the reports come in, cut and paste each one to your new message. Add your own report. Send it; the nickname sends it to everyone you entered into the nickname file and you don't have to type all the addresses each time. You need to do this the same day or no later than the next that you get the reports. In the upper grades students probably could do this.
2. Each participant could set up a nickname file and enter the addresses for everyone in their exchange group. Each week they follow the instructions above for sending to a nickname and their information would automatically go to everyone in their group. That is what I will do the next time I do this.

HOW'S THE WEATHER?

by Katye Alford
Cooper's Elementary, Elm City, NC
919-937-5612

To be used alone or as part of a larger weather project.

INFORMATION SKILLS

Goal 1-The learner will experience a wide variety of reading, listening, and viewing resources to interact with ideas in an information-intensive environment.

Goal 2-The learner will identify and apply strategies to access, evaluate, use, and communicate information for learning, decision-making, and problem-solving.

COMPUTER SKILLS

Goal 1-The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer technology.

Goal 2-The learner will demonstrate knowledge and skills in using computer technology.

Grade 5 and all grades above.

Goals 1 & 2 above.

Goal 3-The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.

MATH

Third Grade:

Goal 3-The learner will demonstrate an understanding of classification, pattern, and seriation.

Goal 6-The learner will demonstrate an understanding of data collection, display, and interpretation.

Grade 4 & 5 & 6 &7 & 8:

Goal 3-The learner will demonstrate an understanding of patterns and relationships.

SCIENCE:

Grades All

Goal 1-Science is public and probabilistic

Goal 2- Observe, Communicate, Infer, Predict, Use space-time relations, Interpret data, Define operations, Formulate Hypothesis, Control Variables

Grade 3:

Goal 5-Earth Cycles

Grade 5:
Goal 5-Weather and Climate

Grade 7:
Goal 6- 6.2 Weather

SOCIAL STUDIES:
3rd Grade:
Goal 2-The learner will infer that individuals, families, and communities are and have been alike and different.
Goal 6-The learner will evaluate change in different settings.
Goal 8-The learner will apply basic geographic concepts and terminology.
Goal 9-The learner will apply geographic themes to communities.

5th Grade:
Goal 3- The learner will locate major physical features and suggest the influence of location on life in the Western Hemisphere.
Goal 4-The learner will assess the significance of the physical and cultural characteristics of regions within the Western Hemisphere.
Goal 5-The learner will evaluate ways the people of the Western Hemisphere use, modify, and adapt to the physical environment.

Grade 6 & 7 & 8 if you can get some contacts in the countries you study. Your objectives would be the same as grade 5.

OUTCOME:
The learners will use a map to find places and then plot places onto personal and/or classroom maps.
Learners will use latitude and longitude if age appropriate.
The learners will become aware of weather patterns and how they vary from place to place.
The learners will see that they are not isolated but part of a larger pattern.
The learners will gain an understanding of weather maps and map keys.
The learners will understand that weather relates to personal lives and activities in the places studied.

Background:
Classroom discussion of how the students think weather affects their own lives and how that might be different for other places. Discuss how weather changes and why they think that happens. Discussion of what this project is and how we can communicate through the Internet with other places and get to know people in those places.

Time Required:
Several weeks. If using as part of a larger project it will follow that time line.

Materials:

1. Maps, atlas, etc. to use for research.
2. Duplicated maps that students will use.
3. A classroom or hall map. (Makes a great show-off bulletin board!)
4. Colored paper or various materials to use as weather symbols. I used a hole punch and made circles of various colors and gave each child a ziplock bag with circles of various colors in it.

Procedure:

1. This can be done in groups or individually depending on the ability of your students and on how many schools participate in the project.
2. Locate other schools from as many different areas as possible. You can do this by subscribing to the Newsgroup Kidsphere or others and send out a message that you are looking for schools to participate in a project. Give some fairly specific information about the project and the timeline for it. Send this out AT LEAST 2 months before you want to begin. It takes a while to get your responses and get them organized.
3. Make your report about your weather data and about the events and activities to the participating schools.
4. Receive reports from the other schools.
5. After the initial schools are located and you are ready to begin, give out the maps. Everyone finds the places on maps. Then assign groups or however you are doing it. Every place should be marked and named on every map.
6. Kids decide what information they will place on their maps and which color they will use for each thing. My class did rain, sunny, cloudy, snow, storms.
7. Students make map keys listing the weather conditions and glue on the color circle or whatever they are going to use to symbolize that condition for each place reporting.
8. This activity will be repeated each week so you will need a lot of maps. I suggest doing this on individual maps two or three times and the rest of the time just do it on a large class map or on the bulletin board map in the hall and instead of gluing on the symbols attach them with pins or tape or something so they can be changed weekly.
If you are going to do it on small maps only a couple of times, you should do it those weeks in a row so the kids can see the changes from week to week. If you skip weeks it won't mean the same.
9. Discuss how the weather changes for each place weekly and how that would affect the lives and activities of the people living there.

Evaluation:

Teacher observation
Grading of the maps
Essay questions concerning the project

Suggestions:

1. Make a bulletin board in the hall with a huge map on it. Mark and name the places in the project on the map. Make a map key with some cutesy symbols to stand for the weather conditions. Title it something about the Internet. Weekly, let your students change the weather conditions on the map after you get the reports. Around the edges pin cards with some of the social data (such as ice skating, swimming, etc.) which relates to the weather in that place; use ribbons to make lines from the cards to the places with which they go. If you do this in the spring it could be related to a project that tracks robins and you could show when robins arrive in each place or tell when flowers begin blooming, etc.
2. Choose a time to do this project when the weather will be changing quickly in YOUR area from one season to another. The children will see that everyone else's changes are not the same as yours at that particular time. If doing this project as an entire unit with the LENGTH OF DAY AND NIGHT PROJECT then you would do this for a few weeks before the 12 hour day/night in YOUR area and after that date. That would be spring and fall and should be your most dramatic weather changes.
3. This can be a very hard to manage project. The lead teacher (YOU) will have to manage all the data sent by the schools because it needs to be exchanged with everyone, not just you. When I did it, I had about two dozen schools in all parts of the US and many in Canada. That was too many to manage. When I do this again I will limit it to no more than ten. Try to get someone as near a pole as possible and then work from there toward the equator. If you get a very large number then you could divide them into groups. Try to get a VERY FIRM COMMITMENT. People on the Internet are notorious for signing up for projects, getting overloaded, and then not following through. That is a disaster for your students assigned to them.

Each week on a prearranged date everyone will send their information. This can be handled two ways.

1. It can all be sent to you. You go into your E-mail under nicknames and set up a group with all the participants in it and give it a nickname. Start a New Message. Put the nickname as the address; and, as the reports come in, cut and paste each one to your new message. Add your own report. Send it; the nickname sends it to everyone you entered into the nickname file and you don't have to type all the addresses each time. You need to do this the same day or no later than the next that you get the reports. In the upper grades students probably could do this.
2. Each participant could set up a nickname file and enter the addresses for everyone in their exchange group. Each week they follow the instructions above for sending to a nickname and their information would automatically go to everyone in their group. That is what I will do the next time I do this.

Title: North Carolina Counties

Author: Connie Thompson

School: New Hope Elementary

Address: 137 Stowe Road
Gastonia, NC 28056

Phone Number: (704) 824-1616

Subject Area: Social Studies

Grade Level: 4

Time Required: 2 weeks or less

NC Standard Course of Study Goals:

Social Studies: Goal 12
Computer: 3.2
Information: 2.1, 2.2

Background Information/Pre-Lesson Instructions:

Students were assigned to research a county in North Carolina. Students researched reference books and nonfiction books in the library. Students searched the Internet to find additional information.

Materials/Equipment/Technology:

North Carolina reference books
Nonfiction books on North Carolina
Computer with Internet Connection

Instructional Strategies/Procedures:

Students were assigned a county in North Carolina. Students were asked to find the following information:

1. Year county was formed
2. For whom the county was named
3. Location of county
4. Is the county part of the mountains, piedmont, or coastal plains of NC?
5. Size of the county
6. Population
7. County seat
8. Products

Students used resources found in the library. Each student searched on the Internet to find information. Site used was State Library of North Carolina, **http://hal.dcr.state.nc.us/ncslhome.htm**. Next step was to click on NC Encyclopedia, **http://hal.dcr.state.nc.us/ncslnew.map?340.93**.
Then choose History of the County,
http://hal.dcr.state.nc.us/NC/CNTYOUT/CITYCOVER.HTM.
Next locate the county.

Student Evaluation:

Completed assignment
Teacher observation of research skills
Location and print out of County from Internet

Follow-up Activities:

Continue study of counties until all are researched.
Write to one school in each county- (E-mail)
Find key-pals from the above schools
Publish a class booklet on counties
Search database provided by NC DPI on NC counties
NC People- **http://hal.dcr.state.nc.us/nc/bio/ncbio.htm**
State Symbols- **http://hal.dcr.state.nc.us/NC/SYMBOLS/SYMBOLS.HTM**

Suggestions for Replication:

None

Title:	Historic Sites of North Carolina
Author:	Robin Floyd
School:	Woodfin Elementary
Address:	108 Elk Mountain Road Asheville, NC 28804
Phone Number:	(704) 254-3166
Subject Area:	Social Studies
Grade Level:	4
Time Required:	1-2 Weeks

NC Standard Course of Study Goals:

The learner will assess the significance of physical and cultural characteristics of regions within North Carolina and the regions of which North Carolina is a part.
Learner will trace developments in North Carolina history and describe their impact on the lives of people today.

Background Information/Pre-Lesson Instruction:

Define "historical site"
Review three regions of North Carolina
Share examples of travel brochures

Materials/Equipment/Technology:

Activity Sheet for Historic Sites of North Carolina and computer with Internet access.

Instructional Strategies/Procedures:

Activity can be carried out by individuals or small groups.

HISTORIC SITES OF NORTH CAROLINA

1. Open Netscape.
2. Select File (from the top menu) and highlight Open Location.
3. In the box, type: **http://hal.dcr.state.nc.us/ncslnew.map?332,79** (click Open)
4. You will see the North Carolina Encyclopedia homepage.
5. Scroll down through the topics until you find Historic Sites. Double click on this.

6. Now you will see a map showing the three main regions of North Carolina: Mountains (West), Piedmont (Central), and Coastal Plains (East). Click on the Western North Carolina area. Choose one of the cities listed in yellow and "visit" that historic site. Read the information that is given. You may visit another site if you choose. Click on the square that says BACK (upper left of screen) to go back to the previous screen.
7. Next, choose one site in the Piedmont to "visit", and one in the Coastal Region. Read and study the information that is given.
8. You must now choose one of the three or four sites that you visited. Do not choose the city in which you live. This will be the one on which you will create your project. You may print this page only. (There should be only one.)

PROJECT:

You are being "hired" to make a TRAVEL BROCHURE for the historic site that you chose. (See the several examples that your teacher has in class.)

You must include the following information:

1. Where is the historic site located?
2. In which county is it?
3. Why is it historic? (Give as many details and facts as you can!) Was it named after anyone?
4. What will one see on a visit to this place?
5. Any other necessary details for a trip. (Include directions, cost, etc.)
6. Add a colorful picture (or pictures!) of what you think this site would look like. Use your imagination.

Be ready to share your information as we trek through North Carolina during Social Studies. The teacher will provide materials for your project. Good luck and have a fun "trip" on the INTERNET. Please write any questions for the teacher in the space below, so that you will not forget to ask for important information.

Student Evaluation:

Travel Brochure will be graded based on completeness, neatness and creativity.

Follow-up Activities:

Could include the development of additional lesson plans using other information found on the website.
Share brochures with classmates.
Role-play a person from NC history.

Suggestions for Replication:

Share with appropriate grade levels.

Title: State Symbols of North Carolina

Author: Robin Floyd

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Area: Social Studies

Grade Level: 4

Time Required: One hour

NC Standard Course of Study Goals:

The learner will locate major physical features and suggest the influence of location on life in NC.
The learner will assess the significance of physical and cultural characteristics of NC.
The learner will evaluate ways people in NC use, modify and adapt to the physical environment.
The learner will evaluate the significance of the movement of people, ideas and goods from place to place.
The learner will trace development in NC history and describe its impact on people today.

Background Information/Pre-Lesson Instruction:

This is an introductory lesson in which students use discovery learning to find out specific information on NC.
Discuss use and reasons for symbols as pre-lesson activity.

Materials/Equipment/Technology:

Computer with Internet access and one activity sheet per student.

Instructional Strategies/Procedures:

1. Open Netscape.
2. Select File (from the top menu) and highlight Open Location.
3. In the box, type: **http://hal.dcr.state.nc.us/ncslnew.map?332,79** (Click Open)
4. You will see the North Carolina Encyclopedia home page.

5. Scroll down to find State Symbols. Double click on this. The State Emblems page will appear.
6. Read the text and answer the following questions as you find the appropriate information. You may also click on the "cameras" in order to view the pictures that accompany each symbol.

ACTIVITIES AND QUESTIONS

1. What is the official State Beverage of North Carolina? ____________
2. When was this symbol adopted? ____________________
3. How many gallons of this beverage do North Carolina residents consume every year? __________
4. What is the official State Bird of N.C.? ___________________
5. Contrast the male and female of this species. Give at least three differences between the two.
6. What does this bird eat? _________________________________
7. What is the official Boat of North Carolina? ___________________
8. How did this boat get its name? __________________________
9. Why was this boat particularly useful? ___________________
10. What are the official State Colors of North Carolina? __________
11. What is the State Dog of N. C.? _____________________________
12. From where did this dog receive its name? __________________
13. List three characteristics of this dog.
14. Draw a picture of the State Flag of North Carolina in the space provided below.
15. Read the additional information provided about the flag.
16. What is the State Flower of North Carolina? ________
17. In what part of the state is it most likely found? ________
18. Look at the picture of this flower and write a description. Be as specific as possible. ____________________________________
19. What is our State Insect? ______________________________
20. How much money is made from honey production each year in N.C.?
21. What is another important function of this insect? __________
22. What is North Carolina's State Mammal? __________________
23. List one interesting fact about this animal. __________________
24. What is our State's Motto? ______________________________
25. What does this mean? _________________________________
26. North Carolina has two nicknames. What are they?
27. Choose one and tell how it originated. ____________________
28. What is the official State Reptile of N.C.? ____________________
29. Why is this animal so useful? __________________________
30. What is the state rock? ___________________________
31. Name at least two buildings that were made using this important material.
32. Read the words to the official state song. What tone is depicted through the words of this song? Describe the overall feeling of these words.

33. The State Precious Stone is the ______________________.
34. Describe the largest one of these ever found in North Carolina.
35. What is the State Tree of North Carolina? _______________
36. List three important products that come from this tree.
37. The official State Vegetable is?
38. This was designated by the General Assembly of the year _____.
39. Draw a picture of our newest state symbol in the space provided below.
40. Go back and review any of the State Symbols that you would like to look at more closely. When you have completed this activity select File (from the top menu), then Quit.

Student Evaluation:

Students will be evaluated based on completion and correctness of answers.

Follow-up Activities:

Create NC cities travel brochures.
Act out biographical role-plays of NC historical figures.
Write small group reports.

Suggestions for Replication:

Share with other appropriate fourth grade classes

Title: Lighthouses

Author: Sharon Davidson

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Areas: Reading, Social Studies and Art

Grade Levels: 4

Time Required: 1-2 weeks

NC Standard Course of Study Goals:

Reading Comprehension
North Carolina social studies - geography and history

Background Information/Pre-Lesson Instruction:

Discussion which includes history, purposes, types and locations of various lighthouses in the US. Read Keep the Lights Burning Abbie.

Materials/Equipment/Technology:

Lighthouse Activity Sheet and computer with Internet access.

Instructional Strategies/Procedures:

Project can be carried out by individuals or in small groups.

Lighthouse Activity Sheet

1. Open Netscape.
2. Select File from the top menu. Highlight Open Location.
3. In the box, type:
   http://zuma.lib.utk.edu/lights/
   (Click Open)
4. You will see the Lighthouse Getaway home page.
5. From the list, click on one region in the US. You will see that region's homepage.
6. Scroll down and click on the different lighthouses in the region about which you would like to read or view. (Click on an image to enlarge it) Use the back key to go back to the main list of lighthouses in a particular region.

7. To exit the homepage of a particular region, use the Back key until you reach the main Lighthouse Getaway home page.

8. Continue reading information and viewing different lighthouses by selecting different regions following directions 4 through 7 above.

9. Select File, Quit from the top menu.

Student Evaluation:

Construction of a lighthouse by individual students will be graded on authenticity, creativity and quality.

Follow-Up Activities:

Display of individual lighthouses.
If you are studying electrical circuits, the lighthouses can be constructed to actually light up.

Suggestions for Replication:

Share with other appropriate grade levels

Title: Paint by Numbers

Author: Classroom Connect (submitted by Carol Horsley)

School: New Hope Elementary

Address: 137 Stowe Road
Gastonia, NC 28056

Phone Number: (704) 824-1617

Subject Area: Math

Grade Level: 4

NC Standard Course of Study Goals:

Math 4.1, 4.6, 4.9, 4.11, 5.6

Background Information/Pre-Lesson Instructions:

Students should be able to:
Measure perimeter, height, and area accurately.
Discover and utilize the formula for determining surface area.
Use the Internet for research and information processing.
Predict the amount of paint needed for a painting task.
Work effectively in teams.

Materials/Equipment/Technology:

Computer with Internet access and World Wide Web browser software
Measurement tools: yardstick, ruler, long tape measure
Printer
Graph paper (optional)

Instructional Strategies/Procedures:

1. Ask students if they've ever noticed that there is never enough paint, or there's sometimes too much, when their family paints a room in their house. Tell students that accurate measuring and planning prevents this from happening.
2. Have students divide into teams and peruse the school for a room needing a new coat of paint. Have each team choose a room or area of the school to "paint." They'll use their measuring tools to determine the perimeter of the room's floor, the height of the walls, and the area of the ceiling. They should also count the number of doors and windows, record whether doors are double-doors, and record the size of the windows.

3. Students will use three different methods to determine how much paint they need: a best (or wild!) guess, human computation, and software computation. After they've completed their measurements, have them guess how much paint they'll need--the way most of "us" do it!

4. Teach students how to use formulas to determine the size of the surface area they want to paint. Tell them how much paint professional painters estimate is needed to cover a specific amount of space.

5. Next, have students go on-line to plug their measurements into software that computes how much paint is needed for a specific job. Consider how many coats of paint are necessary as well.

Paint Estimator Site on the World Wide Web

URL: **http://www.btw.com/applets/paint_calc.html**

6. Have students try to uncover the formula for determining surface area from the computations the site makes with their data. How closely did the students' computations match the software's results? Discuss the possible causes of discrepancies between the actual amount required. Direct students to notice the differences between the three estimates. How will they decide how much paint to buy?

Student Evaluation:

Teacher discretion

Follow-Up Activities:

None

Suggestions for Replication:

None

Title: The Journey North Project

Author: Bonnie Doherty

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown Road
Hillsborough, North Carolina 27278

Phone Number: (919) 732-6138

Subject Areas: Science, Social Studies, Math

Grade Levels: 4 and above

Time Required: Three Months

Background Information/Pre-Lesson Instructions:

Students explore the migration of ten species from South and Central America to North America and Canada. Animals are tracked by satellite telemetry and E-mail messages. Several smaller projects include identification of mystery schools, guessing when the ice on Walden Pond melts, and guessing when a bear comes out of hibernation.

N.C. Standard Course of Study Goals:

Science
Goal 1: To develop a concept of the nature of science.
Goal 2: To develop the ability to use science process skills.
Goal 2.13.1: Based on observations and/or data sets, formulate hypotheses that are testable.
Goal 4.3: The learner will exhibit a positive attitude toward the use of scientific inquiry as a way of thinking and problem solving.
Goal 5.2: The learner will investigate animals and their behaviors within natural environments, focusing on migration.

Social Studies
Goal 3.1.2: Identify state of North Carolina relative to other states and nations using directional designations (longitude and latitude).

Math
Goal 6: The learner will demonstrate an understanding and use of graphing and statistics by collecting, organizing, displaying data collected over a period of time and interpreting the information.

Materials/Equipment/Technology:

Map of World, map of hemisphere, computer with Internet connection.

Instructional Strategies/Procedures:

1. Using information from E-mail, posted on maps, spotting locations of animals.
2. Researched the animals involved in the tracking.
3. Collected and organized data about photo periods.
4. Used prediction skills to identify locations of mystery schools.
5. Entered data into formulas and computed findings.

Student Evaluation:

Reports were prepared and evaluated. Tracking information on the maps were kept up to date. The class predicted correctly the location of seven of the eleven mystery schools.

Follow-up Activities:

A presentation was made at the regional science fair in the spring in 1995.

Suggestions for Replication:

This project is repeated annually. Journey North can be found on the Internet at
http://www.ties.k12.mn.us/~jnorth/index.html

or the program can be accessed through E-mail at
jnorth-info@learner.org.

Title: Australia E-mail Project

Author: Susan Tripp

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown Road
Hillsborough, North Carolina 27278

Phone Number: (919) 732-6138

Subject Areas: Communications, Technology

Grade Levels: 4 and others

Time Required: Entire School Year

Background Information/Pre-Lesson Instructions:

As a School*Tech* project, my class communicated via E-mail with pen pals in Boggabri, Australia. After our initial contact, the class separated into research groups to find and share information about Australia. We discovered facts about their geography, people, food, and recreation. We also produced a video tape to send to our sister class in Australia to tell them about our school. We enjoyed communicating with them.

N.C. Standard Course of Study Goals:

Goal 2: The learner will use language for the acquisition, interpretation, and application of information.
Goal 2.1: The learner will identify, collect or select information and ideas.
Goal 2.2: The learner will analyze, synthesize and organize information and discover related ideas, concepts or generalizations.
Goal 4: The learner will use language for personal response.
Goal 4.1: The learner will respond to personal situations and events.
Goal 4.2: The learner will respond to personal, social, cultural and historical significance of personal experiences.

Materials/Equipment/Technology:

Map of World, computer with E-mail connection, camcorder.

Instructional Strategies/Procedures:

1. Exchange E-mail letters with key pals in Australia.
2. Divide into research groups to find and share information about Australia.

3. View and discuss video tape received from class in Australia and compare similarities and differences between the two cultures.
4. Prepare a video response to send to Australia.

Student Evaluation:

Assess reports that were shared, monitor quality of E-mail letters written, and evaluate quality of tape before it is sent.

Follow-up Activities:

Cook an Australian meal.
Research the ozone layer problem.
Send snail-mail letters to students who have moved on to the next classroom.

Suggestions for Replication:

Australia's summer vacation and North Carolina's summer vacation are at different times of the year, causing a big time frame when students are not in touch. In addition, when each class begins the new school year, new students are involved. It would be good to be aware of this, and schedule communications accordingly.

Student Evaluation:

Individual activities will be assessed by student and teacher according to guidelines and rubrics established for each assignment.

Follow-up Activities:

Map skills were taught and practiced. We have created treasure maps based on real islands located somewhere in the Atlantic Ocean. Messages about our treasures and the latitude and longitude of our islands will be sent off for other classes to guess which real world island holds our secret treasure buried before modern maps were created.

Students completed a variety of writing activities: want ads to find ship crews; letters describing their hidden treasures; and reports about famous pirates.

Suggestions for Replication:

Each activity can be carried out as an individual project or all activities can be utilized as a thematic unit.

Title: Pirate Treasure

Authors: Linda J. Kubik

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown School Road
Hillsborough, NC 27278

Phone Number: (919) 732-6138

Subject Areas: Science, Math, Social Studies, Communication

Grade Levels: 4 or above

Time Required: 1 year

NC Standard Course of Study Goals:

Goals will vary to match the activities selected from this unit.

Background Information/Pre-Lesson Instructions:

You might want to read a novel such as Treasure Island to provide some background or motivation for this unit.

Materials/Equipment/Technology:

1-2 gallon jug, salt, black paper, tape "treasure", paper & pencil, E-mail access (minimum) and/or access to the World Wide Web.

Instructional Strategies/Procedures:

1. Students will research pirates and the role they played in the history of North Carolina. See the Pirate Page for ideas located at
   http://www2.ecst.csuchio.edu/~beej/pirates/piratepage.html
2. Students will study hurricanes and their effects on North Carolina.
3. Students will develop an understanding of the specific vocabulary related to this area of studies: hurricanes, navigation, and sunken treasure.
4. Students will participate in a simulation activity in which they bury a treasure in saltwater and store it in our school refrigerator locker which will be retrieved at the end of the school year. The effect of saltwater on various objects will be evaluated. (The procedures for this activity can be located on the S.S. Central America Home Page **http://web.sunbelt.net/~wilkerson/shipwreck.html**.)

Title: Endangered Animals Activity Part 1
(Part I of 2)

Author: Sharon Davidson

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Area: Science

Grade Levels: 4-5

Time Required: One hour

NC Standard Course of Study Goals:

The learner will use process and manipulative skills to learn about endangered plants and animals.
The learner will use computer technology as a method of scientific inquiry.

Background Information/Pre-Lesson Instruction:

Discuss meaning of "endangered" and "extinct."

Materials/Equipment/Technology:

Computer with Internet access and activity sheet.

Instructional Strategies/Procedures:

ENDANGERED ANIMALS - Activity 1

1. Open Netscape.
2. Open Bookmarks. Highlight Endangered Species.
3. If Endangered Species is not under Bookmarks, select File (from the top menu) and drag down to Open Location.
4. In the box, type:
   http://www.nceet.snre.umich.edu/EndSpp/Endangered.html
   Then click on Open.
5. You will see the homepage EE-Link Endangered Species Page.

6. Scroll down to the Table of Contents. Click on Endangered and Extinct Species List. Click on Clickable regional map.
7. Click on the Southeast region where North Carolina is located.
8. Click Animal Species. You will see a list of endangered animals in the Southeast, listed in alphabetical order.
9. Scroll to find each of the following animals in the list. Place a check beside each animal that can be found in North Carolina. (Individual states are listed beside Historic Range).

Endangered Animals in the Southeast

a.______ Bat, Virginia big-eared
b.______ Butterfly, Saint Francis' satyr
c.______ Chub, slender
d.______ Crocodile, American
e.______ Elktoe, Appalachian
f.______ Heelsplitter, Carolina
g.______ Panther, Florida
h.______ Pearlymussel, Appalachian monkeyface
i.______ Salamander, Cheat Mountain
j.______ Shiner, Cape Fear
k.______ Shrew, Dismal Swamp
l.______ Shrimp, Kentucky cave
m.______ Silverside, Waccamaw
n.______ Skink, sand
o.______ Snail, noonday
p.______ Snake, eastern indigo
q.______ Spinymussel, Tar River
r.______ Squirrel, Carolina northern flying
s.______ Tortoise, gopher

10. When you finish, click on the Back key. Click on Plant Species.
11. Scroll to find each of the following plant species in the list. Place a check beside each plant than can be found in North Carolina. (Individual states are listed beside Historic Range).

Endangered Plants in the Southeast

a._____ American chaffseed
b._____ Blue Ridge goldenrod
c._____ Bunched arrowhead
d._____ Canby's dropwort
e._____ Carter's mustard
f._____ Cooley's water-willow
g._____ Dwarf-flowered heartleaf
h._____ Four-petal pawpaw
i._____ Green pitcher plant
j._____ Hairy rattleweed
k._____ Heller's blazingstar
l._____ Key tree-cactus
m._____ Mountain golden heather
n._____ Mountain sweet pitcher-plant
o._____ Pigeon wings
p._____ Pondberry
q._____ Running buffalo clover
r._____ Schweinitz's sunflower
s._____ Smooth coneflower
t._____ Snakeroot
u._____ Wireweed

12.. Quickly scroll through the endangered plant and animal lists again. Which state in the Southeast appears most often in reporting endangered animals and plants? Why do you think this state has so many endangered species?

13. Use the Back key until you see the United States map again. Click on two other regions in which you would like to see the lists of endangered plants and animals that live there.

14. Notice how there are different species based on the region in which they live. Why do you think certain animals are only able to live in certain regions?

15. Click Back until you get to the Endangered and Extinct Species Lists page.

16. Select File, Quit from the top menu.

Extension:

Choose one of the endangered plants or animals and do some further research. Use Web Crawler or other sources available in our media center in order to find your information. Prepare a written report to turn in, and an oral report to share with the class.

Student Evaluation:

Student will be evaluated on completion of project and accuracy of answers.

Follow-up Activities:

Research on a chosen plant and/or animal;
Written and/or oral report;
Draw illustrations of plants and or animals;
Creative writing activities;
Map to show where plants and animals are found;
One extension activity is suggested at the end of the lesson.

Suggestions for Replication:

Share with other appropriate grade levels.

Title: Endangered Animal Activity Part 2
(Part 2 of 2)

Author: Sharon Davidson

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Area: Science

Grade Levels: 4/5

Time Required: 2-3 hours

NC Standard Course of Study Goals:

The learner will use process and manipulative skills to learn about endangered plants and animals.
The learner will use computer technology as a method of scientific inquiry.

Background Information/Pre-Lesson Instruction:

Refer to Endangered Animal Activity Part 1 in this set of materials.

Materials/Equipment/Technology:

Computer with Internet access and activity sheet.

Instructional Strategies/Procedures:

ENDANGERED ANIMALS - Activity 2

1. Open Netscape.
2. Open Bookmarks. Highlight Endangered Species.
3. If Endangered Species is not under Bookmarks, select File (from the top menu), and highlight Open Location.
4. In the box, type:
   http://www.nceet.snre.umich.edu/EndSpp/Endangered.html
   (Click Open)
5. You will see the homepage EE-Link Endangered Species Page.
6. Scroll down to Table of Contents. Click on Facts and Factsheets.
7. Click on 60 Endangered Species Images.
8. Click on the picture beside Mammals-4- (Images can be enlarged as you work by clicking on each picture)

9. Read about each endangered mammal. Beside the name of each one listed below, write the letter that matches the reason or reasons it is endangered. Use the code sheet.
   _____ Gray Bat (example)
   _____ Indiana Bat
   _____ Ozark Big-Eared Bat
   _____ Gray Wolf
10. Click on the Back key. Click on the picture beside Birds-5-
11. Read about each endangered bird. Beside the name of each one listed below, write the letter that matches the reason or reasons it is endangered. Use the code sheet.
   _____ Bald Eagle
   _____ Kirtland's Warbler
   _____ Least Tern
   _____ Peregrine Falcon
   _____ Piping Plover
12. Click on the Back key. Click on the picture beside Reptiles-2-
13. Read about each endangered reptile. Beside the name of each one listed below, write the letter that matches the reason or reasons it is endangered. Use the code sheet.
   _____ Copperbelly Water Snake
   _____ Lake Erie Water Snake
14. Click on the Back key. Click on the picture beside Fish-5-
15. Read about each endangered fish. Beside the name of each one listed below, write the letter that matches the reason or reasons it is endangered. Use the code sheet.
   _____ Neosho Madtom
   _____ Niangua Darter
   _____ Ozark Cavefish
   _____ Pallid Sturgeon
   _____ Scioto Madtom
16. Click on the Back key. Click on the picture beside Mollusks-16-
17. Read about each endangered mollusk. Notice that they are all endangered for the same reasons. At the end of the mollusk list, use the blank to write the reasons these mollusks are endangered. Use the code sheet.
   Clubshell Mussel
   Crackling Pearly Mussel
   Curtis' Pearly Mussel
   Fanshell Mussel
   Fat Pocketbook Pearly Mussel
   Higgins' Eye Pearly Mussel
   Northern Riffleshell Mussel
   Orange-Footed Pearly Mussel
   Pink Mucket Pearly Mussel
   Purple Cat's Paw Pearly Mussel

Ring Pink Mussel
Rough Pigtoe Mussel
Tubercled-Blossom Pearly Mussel
White Cat's Paw Pearly Mussel
White Wartyback Pearly Mussel
Winged Mapleleaf Mussel

reasons: ____________________

18. Click on the Back key. Click on the picture beside Arthropods-5-
19. Read about each endangered arthropod. Beside the name of each one listed below, write the reason or reasons it is endangered. Use the code sheet.

_____ American Burying Beetle
_____ Hine's Emerald Dragonfly
_____ Hungerford's Crawling Water Beetle
_____ Karner Blue Butterfly
_____ Mitchell's Satyr Butterfly

20. Click on the Back key. Click on the picture beside Plants-22-
21. Read about each endangered plant. Beside the name of each one listed below, write the reason or reasons it is endangered. Use the code sheet.

_____ American Hart's Tongue Fern
_____ Decurrent False Aster
_____ Dwarf Lake Iris
_____ Geocarpon
_____ Houghton's Goldenrod
_____ Lakeside Daisy
_____ Leafy Prairie Clover
_____ Leedy's Roseroot
_____ Mead's Milkweed
_____ Michigan Monkeyflower
_____ Minnesota Dwarf Trout Lily
_____ Missouri Bladderpod
_____ Northern Wild Monkshood
_____ Pitcher's Thistle
_____ Ponberry
_____ Prairie Bush-Clover
_____ Price's Potato-Bean
_____ Running Buffalo Clover
_____ Small Worled Pogonia
_____ Western Prairie Fringed Orchid

22. Click on the Back key. Select File (from top menu), Quit, or do the extension activity.

Extension:

23. Click on the Back key. Scroll down and click on 8 Endangered Species Images from Optilearn.
24. Read about these endangered species and enlarge the pictures of each.
25. Select File (from the top menu), then Quit.

Student Evaluation:

Student will be evaluated on completion of project and accuracy of answers.

Follow-up Activities:

Research on an endangered plant/animal
Small group presentations
Map to show where plants/animals are located
Illustrations of plants/animals
Creative writing activities

Suggestions for Replication:

Share with other appropriate grade levels.

Title: Netscape China Project

Author: J. Lee

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Areas: Reading/Social Studies/Computer

Grade Level: 4-5

Time Required: One hour

Background Information/Pre-Lesson Instructions:

This activity was designed to go with the trade book In the Year of the Boar and Jackie Robinson by Bette Bao Lord. I integrated Social Studies and Computer skills as well as some Science into the unit. Discuss China geography as a pre-lesson activity.

Materials/Equipment/Technology:

One activity sheet per student and a computer with Netscape.

NC Standard Course of Study Objectives:

Communication Goals:
1.1 - The learner will apply preparation strategies to comprehend or convey experiences and information.
1.2 - The learner will apply engagement strategies to comprehend or convey experiences and information.
2.1 - The learner will identify, collect, or select information and ideas.
2.2 - The learner will analyze, synthesize, and organize info and discover related ideas, concepts, or generalizations.

Social Studies Goals:
The learner will acquire information from a variety of sources.
The learner will acquire information about another culture.

Computer Skills Competency Goals:
1. The learner will understand important issues of a technology based society and will exhibit ethical behavior in the use of computer technology.
2. The learner will demonstrate knowledge and skills in using computer technology.

3. The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply, and communicate information.

Instructional Strategies:

1. Open **Netscape**.
2. Go to **Bookmarks** and click on "**Webcrawler Searching**." Type in "**Chinese Culture**."
3. Click on "**My China Page**."
4. Click on "**Chinese Culture**."
5. Click on "**Chinese Proverbs**." Look under the letter ____. Write one proverb and then click on "**here**" to see what it means. Write in your own words what the proverb means. Click on "**go back**."
6. Click on "**Back**" until you get to the "**Chinese Culture**" screen again.
7. Click on "**Chinese Holidays**." Scroll to "**Official Chinese Holidays**." Write down one of the holidays; one fact about the holiday.
8. Scroll to "**Chinese Traditional Holidays**." Write down one holiday and one fact.
9. Go "**Back**" to "**Chinese Culture**" screen. Click on "**Travel**."
10. Scroll down to "**Chinese Scenery**" and click on it. Click on the **picture of the Great Wall of China** to enlarge it. Write down all the colors you see in the picture.
11. Click on "**Back**" until you get back to "**Travel**" screen. Scroll down to "**Chinese Currency**." Name three types of Chinese coins.

Student Evaluation:

Students will be evaluated based on completion of answers.

Follow-Up Activities:

Students will prepare a presentation on China based of findings of this activity.

Suggestions for Replication:

Share with other appropriate grade levels.

Title: Olympic Games

Author: Sharon Davidson

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Areas: Current Events/Social Studies

Grade Levels: 4/5

Time Required: 1-2 hours

NC Standard Course of Study Goals:

The learner will acquire information from a variety of sources.
The learner will demonstrate skill in self-management.
The learner will participate effectively in civic affairs.
The learner will study maps and relate maps to current events.

Background Information/Pre-Lesson Instruction:

Review and discuss history of the Olympics, symbols, bar graphs, and maps as a pre-lesson activity.

Materials/Equipment/Technology:

Computer with Internet access and activity sheet.

Instructional Strategies/Procedures:

1. Open Netscape.
2. Open File. Open Location from the top menu.
3. In the box type: **http://www.atlanta.olympic.org** Click Open.
4. You will see the 1996 Olympic Games Homepage. Add this page to your bookmarks.
5. Click on 197 countries. You will see a list of these countries. Listed first is the abbreviation for the country, then the entire name.
6. Choose three countries in the list that are unfamiliar to you. Use a world map to locate these three countries. List the three countries you found.
7. Click on the Back key. Click on the torch that says "Welcome to the Games."
8. Scroll down and click on "1996 Olympic Games at a Glance."
9. On what date will the 1996 games begin?______ end?______
10. How many days of competition will there be? __________

11. Click on "Official Logo of 1996 Games." What are the classic (usual) symbols of the Olympics? Draw these on your paper.
12. Click on the Back key. How many athletes will represent the different nations in the Olympic Games? __________
13. Study the bar graph. How many more athletes are competing in the 1996 Olympics than the 1984 Olympics? __________
14. What group of people will compete more than ever before in the 1996 Olympics? __________ Name one reason for this increase.
15. Click on "Sports." Scroll down and click on the 1996 Official Program. Look at the list of the 26 different sports that will be held. Use the scroll bar to click on a specific sport, then click "Search by Event."
16. Click on the name of that sport again. Enlarge the picture that goes with the information about that sport. Click on the Back key. Read any interesting information about that event.
17. Click on the Back key until you see the list of sports again. Continue to investigate at least five of the sporting events using directions 15 and 16.
18. When finished with this activity, click on the Back key until you reach the "Games at a Glance" homepage.
19. What is the average ticket price to see an event? __________
20. Click on the "1996 Olympic Torch Relay." How many miles is the relay? __________ How many days will it take? __________
21. Enlarge the US map showing the relay route. Trace the route with your finger beginning in Los Angeles, ending in Atlanta.
22. Click on the Back key until you reach the "Games at a Glance" homepage. Click on the "Olympic Stadium" to see a picture of where most of the events will be held. (This will be the new home of the Atlanta Braves after the Olympics!)
23. Click on the Back key. Click on "Izzy" to see the official mascot of the 1996 Olympic Games. Draw and color Izzy in the space below.
24. Click on the Back key. Scroll down and click on "Olympic Games Official Products." Scroll down and click on any souvenirs you would like to see.
25. Click on the Back key until you reach the "Welcome to the 1996 Olympic Games" homepage. Click on any other information you would like to read.
26.. Go to File, Quit from the top menu.

Student Evaluation:

Student will be evaluated on completion of assignment and accuracy of answers.

Follow-Up Activities:

Make a "symbol book" of Olympic symbols.
Do an oral report on the history behind one Olympic sport.

Suggestions for Replication:

Share with other appropriate grade levels.

Title: Balloonin' USA

Author: Linda Brown

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Areas: Reading, Social Studies, Science, Geography, Computer

Grade Levels: 4-5 and more

Time Required: School Year

NC Standard Course of Study Goals:

The learner will understand important issues of a technology-based society and will exhibit ethical behavior in the use of computer technology.
The learner will demonstrate knowledge and skill in using computer technology.
The learner will assess the significance of the physical and cultural characteristics of regions within the US.
The learner will evaluate the significance of the movement of people, goods and ideas from place to place.
The learner will evaluate the extent to which basic cultural institutions of the US help people meet their needs.
The learner will trace developments in the history of the US and assess their impact on the lives of people today.

Background Information/Pre-Lesson Instruction:

A discussion about hot air balloons
Review mapping skills

Materials/Equipment/Technology:

A computer with Internet access and E-mail, US map, Balloonin' USA kit, registration fee, and notebooks for each class participating.

Instructional Strategies/Procedures:

BALLOONIN' USA

1. Open **Netscape**.
2. Select **File** (from the top menu) and highlight **Open Location**.
3. In the box, type: **http://balloon.tie.net** (click **Open**).
4. You will see the **Balloonin' USA** homepage.
5. Scroll down through the various topics. The contents are explained next to each choice. Click on these to read about the project, and to see pictures taken throughout various stages of Kevin's travels. You should be able to identify the different participants and the goals of this experience.
6. After reading a selection, click on the **back** icon to return to the homepage.
7. A large US map will be placed on a bulletin board in the hall where the journey will be tracked for the entire school year.
8. Click on **file**, and then **quit** when you have finished.

Student Evaluation:

Progress will be monitored by group sharing, tracking balloon and using map, use of E-mail to communicate with pilot and other schools involved in Balloonin USA.

Follow-Up Activities:

Reading and communication - E-mail to pilot and other schools
Art - make hot air balloon models
Language Arts - writing stories and poems relating to balloonin' project
Geography - US state study with mapping skills involved and travel brochures
Math - tracking mileage, figuring area
Social Studies - state history
Flow Map of the journey

Suggestions for Replication:

Share with other appropriate grade levels.

Title: President Bill Clinton

Author: Sharon Davidson

School: Woodfin Elementary

Address:
108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Areas: Reading, Social Studies, Computer

Grade Levels: 4-6

Time Required: One week

NC Standard Course of Study Goals:

The learner will use language for the acquisition, interpretation and application of information.
The learner will use language for aesthetic and personal response.

Background Information/Pre-Lesson Instructions:

Provide definition of a biography. Activity can be carried out by individuals or small groups.

Materials/Equipment/Technology:

Activity sheet and computer with Internet access.

Instructional Strategies/Procedures:

1. Open Netscape.
2. Open Bookmarks. Highlight Welcome to The White House.
3. If The White House is not listed under Bookmarks, select File (from the top menu) and highlight Open Location.
4. In the box, type: **http://www2.whitehouse.gov/WH/Welcome.html** (Click Open)
5. You will see the Welcome to the White House homepage.
6. Scroll down and click on the picture of The President and the Vice-President.
7. Click on the picture of President Clinton.
8. Scroll down and click on Biography.
9. Click on A Place Called Hope.
10. Read the text. Then, complete the following activities and answer the questions on a sheet of notebook paper.

ACTIVITIES AND QUESTIONS

Fill out President Clinton's birth certificate.

Full name ____________________
Date of birth ____________________
Place of birth ____________________
Father's name ____________________
Mother's name ____________________

A. How did the move to New Orleans help Bill's mother? How did it help Bill to remain in Hope?

B. What important lesson about people did Bill's grandparents teach him? Do you agree or disagree with their beliefs? Why?

C. Name three things for which Hot Springs, Arkansas is known. Locate this area on a map.

D. Why did the Clinton's move there?

E. What was one of Bill's most memorable events during his senior year in high school? How did this event change his life?

F. Besides President Kennedy, what other person became a hero in Bill Clinton's eyes?

G. If you could shake hands with anyone in the world (alive or deceased), who would it be, and why?

H. Name a person who has made a difference in your life, and tell about the influence they have had on you.

I. Who is your "hero"?

J. Several of Bill Clinton's favorite books are mentioned in his biography. Name one of your favorite books.

K. What was Bill Clinton's favorite pastime? What is one of your favorite pastimes?

L. Where did Bill go to college? Why did he consider college to be important?

M. Do you consider going to college important? Why or why not?

N. How did working in Senator Fulbright's office help Bill?

O. Who did Bill Clinton marry? What is his daughter's name?

P. What was Bill doing at the age of 32?

Q. What was Bill's most important goal as governor of Arkansas? Name three things he did to help reach this goal.

R. How do you believe education can be improved in our schools? Who should be responsible for children receiving a good education?

S. What important decision did Governor Clinton make in the fall of 1991? Who did he choose to be his vice-presidential running mate?

T. When was Bill Clinton elected president?

U. What does Hope, Arkansas, mean to Bill Clinton?

V. Write five questions you would ask Bill Clinton if he visited our classroom. Next, write five concerns you have about life in America.

W. If you were the president, tell one thing your would work to improve in America. Why would this be important to you?

Select File (from the top menu), then Quit, or do the extension activities listed below.

Extension:

11. Click on the Back key.
12. Scroll down and click on The First Family.
13. Scroll down and click on Family Life at the White House.
14. Read the text. Click on each picture that you would like to see enlarged as you read.
14. Click on the AU key at the end to hear the voice of Socks, the family cat.
15. Use the Back key until you reach the home page again.
16. Scroll down and click on The White House for Kids.
17. Click on Socks, the cat, and follow his directions for touring the White House.

After your tour, use the Back key until you reach the homepage again. Choose any other information you would like to read or see, using this website.

Student Evaluation:

Check and discuss answers to questions on activity sheet

Follow-up Activities:

Do one suggested extension activity as listed at the end of the lesson. Other extensions could include the development of additional lesson plans using other information found on this Web Site.

Suggestions for Replication:

Share with appropriate grade levels

Title: A Dollar By Any Other Name

Author: Hunter Stone--TAG Facilitator

School: Coopers Elementary

Address: Rt. 2 Box 209-A
Elm City, NC 27822

Phone Number (919) 937-5612

Subject Area: Social Studies and Math

Grade Level: 4-6

Time Required: Four Weeks Computer Skills Curriculum per grade level.

NC Standard Course of Study Goals:

Social Studies Goal 10: The learner will analyze NC's economic relationships, economic relationships in the Western Hemisphere, and economic relationships in Europe.

Information Goal 1.4: The learner will relate ideas and information to life experiences.

Computer Goal 3: The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.

Learning Outcomes:

Students will learn the medium of exchange in the countries from a list composed by the class. Students will learn how to collect data and record this data on a database computer program. Students will become adept at surfing the Internet. Students will learn techniques for designing a program for collecting pertinent information by way of the Internet.

Background Information/Pre-Lesson Instruction:

Research skills; Map skills, Computer
Program for database, Skills for surfing the Internet.

Materials/Equipment/Technology:

Access to Internet.

Instructional Strategies/Procedures:

The purpose of this lesson is to familiarize students with the different currency that is used around the world. We will do this by making a list of items and send out Internet messages for a response as to the cost of each item in each country. Also we will request the current rate of exchange.

Students will use Talents Unlimited planning skills to plan for the activity. They will use Talents Unlimited decision making skills to decide on a list of products that should be researched for costs in other countries.

Students will write a letter to be sent to countries by way of telecommunications for a response as to those particular items in their country. Students will need to prepare a list of countries they are most interested in corresponding with. We will need to set up a mini-course on the database computer program.

Student Evaluation:

The product for this lesson could be an elaborate stand-up chart for the classroom or it could take the form of a video with students presenting their findings. This video could then be shared with their classroom.

Follow-Up Activities:

When the students have learned the money exchange for a country, they could then send for catalogs from other countries and work toward making up catalog orders for other countries (a shop around the world extravaganza).

Students could make a display of money from around the world to be shared with classes throughout the school.

Suggestions for replication:

Use parts of the lesson for younger classes. Let the shopping spree be for toys.

Title: Planet Research

Author: Connie Thompson

School: New Hope Elementary

Address: 137 Stowe Road
Gastonia, NC 28056

Phone Number: (704) 824-1617

Subject Areas: Science, Communication

Grade Levels: 4, 6

Time Required: 1 to 2 hours

NC Standard Course of Study Goals:

Science Grade 4: 5.3, Science Grade 6: 6.6
Computer: 3.1, 3.2, 3.3, 3.4
Communication: 2.2
Information: 1.1, 1.3, 2.1, 2.2

Background Information/Pre-Lesson Instructions:

Students are studying patterns and cycles of planets in science class. Students have been placed in cooperative learning groups, with one planet assigned per group. Students have been introduced to research skills, use of the Internet, and computer databases. Instructor has added the Homepage for NINE PLANETS to the Bookmark of Netscape software, to guide students and make search easier.

Materials/Equipment/Technology:

Encyclopedias, print and electronic
Nonfiction books on Planets
Computer with Internet Connection
Access to the Nine Planets site:
http://seds.lpl.arizona.edu/nineplanets/nineplanets/nineplanets.html
Planet Research Worksheet
Overhead Projector/LCD Panel (optional)

Instructional Strategies/ Procedures:

Students were introduced to the science unit of study by classroom teacher. This activity took place in the library/media center.
Students were placed in nine cooperative learning groups. Each group was assigned a planet. Use of the Bookmark and Nine Planets site were reviewed by whole class instruction with the overhead projector and LCD panel. Students were introduced to the worksheet. Students were instructed to find information on a planet from at least three sources found in the library/media center. Dates of each entry were required so that students can compare research tools and decide which information is more current. All groups were required to use the Internet as one source. Printout of planet information was also required for each group. Purpose of this lesson was to have students research information using a variety of sources found in the typical library/media center.

Student Evaluation:

Completed Planet worksheet, including three difference sources, including Internet. Printout of planet from Internet. These were given to classroom teacher for further use as up-to-date resource during continued study of planets. Observation of cooperative groups and research skills. Discussion of resources used, comparison of information on same subject found in more up-to-date resources. Increased knowledge of subject matter during discussion and written test.

Follow-Up Activities:

Search North Carolina database on planets.
Create database using information gained in planet research.
Additional research to be combined to make a planet booklet for classroom.
As a group or individual, make a model of a planet.

Suggestions for Replication:

Have more than one Internet computer available if possible.

NAME ____________________

PLANET RESEARCH

NAME OF PLANET: ____________________

DISTANCE FROM SUN: ____________________

LENGTH OF YEAR: ____________________

TEMPERATURE: ____________________

HAS MAN LANDED ON THIS PLANET? ____________________

IF NOT, ARE THERE PLANS AT NASA TO FLY TO THIS PLANET? ____________________

RESOURCES:

1. ENCYCLOPEDIA USED ____________________

____

VOLUME: ____________________

DATE: ____________________

2. BOOK USED: ____________________

DATE: ____________________

INTERNET USED? ____________________

DATE OF LAST UPDATE: ____________________

Title: Solar System

Author: Classroom Connect (submitted by Carol Horsley)

School: New Hope Elementary

Address: 137 Stowe Road
Gastonia, NC 28056

Phone Number: (704) 824-1617

Subject Area: Science

Grade Level: 4, 6

NC Standard Course of Study Goals:

Science (4th Grade) 5.3
Science (6th Grade) 6.6

Background Information/Pre-Lesson Instructions:

Use the Internet to find information about the solar system.
Make a scale model of the solar system, including the planets and their relative sizes and distances from the sun.
Practice using telnet, ftp, and World Wide Web browser Internet tools.

Materials/Equipment/Technology:

Personal computer with an Internet connection, including telnet, ftp, and Web access
Graphics-capable printer
Paper, string, tape, and a tape measure

Instructional Strategies/Procedures:

1. Prepare a chart listing the planets and their diameters and mean distances from the sun. Telnet to NASA's SpaceLink for the information to complete the chart.
Telnet to: **spacelink.msfc.nasa.gov**
Log in: guest
Select the Instructional Materials menu.
2. Record the diameter of each planet and the sun, and decide on a scale for making a model of the solar system. Use proportions to determine the diameter of the model of each planet according to this scale.
3. Have students make a scale drawing of each planet, including a label with its name and diameter. Cut out each drawing.

4. Using the drawings, make a scale model of the solar system showing how far each planet is from the sun. Set the distance from the sun to Earth as one meter, then use proportions to figure out the distances of the other planets.
5. On a large bulletin board or empty wall, position the sun model on the far left. Cut a piece of string to scale so it represents the distance between the sun and Pluto. Place the model for Pluto at the end of the string, then place the other planets in their respective positions along that string. Or, cut separate strings representing the distance to each of the other planets. (Depending on the scale you use, you may have to go outdoors to set up your model.)

Student Evaluation:

Teacher discretion

Follow-Up Activities:

1. Find images of the planets on ftp sites and the World Wide Web. Download and print the images. Place the actual images next to their respective planets on your model.
Ftp to: **iris1.ucis.dal.ca**
Go to the pub/gif subdirectories
URL: **http://info.cern.ch/hypertext/DataSources/bySubject/astro/Overview.html**
Click on Databases, Images and Surveys. One great link at this site is The Nine Planets: A Multimedia Tour of the Solar System by Bill Arnett.
2. Visit Cornell University's Planetary Information Web server to find other information about the planets.
URL: **http://astrosun.tn.cornell.edu/Home.html**

Suggestions for Replication:

None

Title: Dr. Seuss Activity

Author: Sharon Davidson

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Area: Language Arts: Similes and Metaphors
in figurative language

NC Standard Course of Study:

The learner will use strategies and processes that enhance control of communication development.
The learner will use language for the acquisition, interpretation and application of information.
The learner will use language for critical analysis and evaluation.
The learner will use language for aesthetic and personal response.

Background Information/Pre-Lesson Instructions:

Definition and uses of simile and metaphor in figurative language should be discussed as a pre-lesson activity.

Materials/Equipment/Technology:

Computer with Internet access, Activity Sheet, The Grinch Song, and Other Dr. Seuss books.

Instructional Strategies:

1. Open **Netscape**.
2. Select **File** from the top menu. Drag down to highlight **Open Location**.
3. In the box, type: **http://aries.phys.yorku.ca/%7Erothery/grinch.html**
Click **Open**.
4. You will see the Dr. Seuss Page - The Great Grinch Debate
5. Read the information under the picture. Then fill out the survey and enter your vote.
6. Scroll down to see the Current Tally. Who has received the most votes? the least?
7. Why did you vote for the character you chose?
8. Scroll down and click on **The Grinch Net**.
9. You will see The Grinch Net homepage. Scroll down and click on **The Grinch Song**.

10. Read the words to The Grinch Song. Then answer the following questions:

In the blank, write S if the phrase from the song is a simile. Write M if the phrase from the song is a metaphor.

_____ You really are a heel.
_____ You're as cuddly as a cactus.
_____ You're as charming as an eel.
_____ You're a bad banana with a greasy black peel.
_____ You're a monster.
_____ You're heart's an empty hole.
_____ You're a rotter.
_____ You're the king of sinful sots.
_____ You're heart's a dead tomato.
_____ You're a three-decker sauerkraut and toadstool sandwich.
_____ You're a crooked dirty jockey.
_____ Your soul is an appalling dump heap.
_____ You're a foul one.
_____ You're a nasty wasty skunk.

11. What is the difference between a simile and a metaphor?
12. Imagine you are looking at a new, very unusual animal that has just been discovered. Write three similes and three metaphors to describe this animal. (You may write them as if you are speaking to the animal).
13. Select **File**, **Quit** from the top menu.

Student Evaluation:

Students will be evaluated based on checking and discussing worksheet.
Students will be able to explain how and why an author uses simile and metaphor.

Follow-up Activities:

Read other Dr. Seuss literature to find other examples of simile and metaphor.
Role-play scenes to demonstrate simile and metaphor.

Suggestions for Replication:

Share with other appropriate grade levels.

Title: Canada

Author: Jenny Lee

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Area: Social Studies, Language Arts, Computer

Grade Levels: 5

Time Required: One hour

NC Standard Course of Study Goals:

The learner will analyze characteristics of people of Canada.
The learner will assess the influence of major religions, ethical beliefs, and aesthetic values on life in Canada.
The learner will evaluate the significance of the movement of people, goods and ideas from place to place.
The learner will evaluate the extent to which basic cultural institutions of Canada help people meet their needs.
The learner will trace developments in the history of Canada and assess their impact on the lives of people today.

Background Information/Pre-Lesson Instruction:

Students will complete this activity as part of a social studies unit on Canada. Review Canadian geography and culture as a pre-lesson activity.

Materials/Equipment/Technology:

Computer with Internet access and one activity sheet per student

Instructional Strategies/Procedures:

Canada Internet Scavenger Hunt

Directions: With your partner, find the answers to the following questions. The answers can be found under the same headings as the questions.

1. Click on Webcrawler Searching. Type in "Canada."
2. Scroll to and click on "Next 25 entries" and click on it.
3. Scroll down to "Canada" and click on it.

4. Look under each heading for the answers to the following questions.

CANADA

1. Canada is the world's ______________ largest country.
2. The capital of Canada is ______________.
3. How many provinces does Canada have? __________. List them:

GEOGRAPHY

1. What is the area of Canada?
2. What is the first largest country in the world?
3. List the main towns of Canada:

SOCIETY

1. What is the population of Canada?
2. How many different races live in Canada?
3. What are the two official languages of Canada?
4. What ages of children are required to attend school in Canada?

COMMUNICATION

1. Name the official newspaper of Canada.

TRANSPORTATION

1. What percent of vehicles in Canada are passenger cars?
2. How many telephones were in Canada in 1993?

MACRO-ECONOMICS AND FINANCE

1. Does Canada have the same money as the United States?
2. What is the income per capita if Canada?

PHYSICAL ECONOMY

1. Does Canada have any currency restrictions?

TRAVELER INFORMATION

1. Name three holidays celebrated in Canada.
2. How many time zones does Canada have?

HISTORY

1. Name two types of people who migrated from Asia into Canada.
2. Who were the first Europeans to arrive in Canada?
3. What did the British North America Act of 1867 do to Canada?

Student Evaluation:

Students will be evaluated on completion and correctness of answers.

Follow-up Activities:

ABC books, oral reports, art projects on Canada, map-making of Canadian geography, small group research projects, and dramatic activity/role-playing Canadian people.

Suggestions for Replication:

Share with other appropriate grade levels.

Title: Tales from Silver Lands

Authors: Sue Smith

School: Coopers Elementary

Address: Rt. 2 Box 209-A
Elm City, NC 27822

Phone Number: (919) 937-5612

Subject Areas: Reading and Social Studies

Grade Levels: 5

Time Required: Four weeks

NC Standard Course of Study Goals:

Social Studies
Goal 1: The learner will analyze characteristics of peoples of the Western Hemisphere.
Goal 11: The learner will analyze changes in ways of living and investigate why and how these changes occurred.
Information
Goal 1.5: The learner will communicate reading, listening and viewing experiences.
Computer
Goal 3: The learner will use a variety of computer technologies to access, analyze, interpret, synthesize, apply and communicate information.

Background Information/Pre-Lesson Instructions:

The student will become more aware of cultural differences among people through reading this piece of literature. This Newbery Award winner is written by Charles J. Finger and won the award in 1925. It is an anthology which is a collection of stories and is set in South America. The main character is Story-teller and the supporting characters are People, Animals, and Birds.

Materials/Equipment/Technology:

Copies of book, diskettes, Internet connection.

Instructional Strategies/Procedures:

1. Locate a class (teacher) in South America and assign one key pal per child or one per group of children.
2. Students read the book and correspond by E-mail with key pals about several stories of their choice.

3. Students can address social, political and economic issues as well as learning about everyday life in each other's cultures making the stories more real.
4. Students will describe the story and ask their key pals to locate the story in South America.

Student Evaluation:

Students in America locate the setting of each story on a map of South America and label it with the story title. They compile and categorize all information gained through E-mail.

Follow-up Activities:

Students do presentation to another 5th grade class at school:
Name and summarize each of the 19 stories. Locate story setting on map. Share information related to culture, everyday life, politics, etc.

Suggestions for Replication:

Choose a different book set in another country or a state.
Focus on one area (weather, culture, holidays) instead of a broad coverage.
Students will use Talents Unlimited planning skills to plan for the activity.

Title: Discover Inventions and Inventors

Author: Donna Craig

School: New Hope Elementary

Address: 137 Stowe Road
Gastonia, North Carolina 28056

Phone Number: (704) 824-1617

Subject Areas: Science, Social Studies, Computer Skills

Grade Level: 5

NC Standard Course of Study Goals:

Science 1.1, 1.2, 1.3, 1.4, 4.1, 4.3, 4.4
Social Studies 11.1, 11.2, 11.3, 12.1, 12.2, 12.3
Computer Skills 1.2

Background Information/Pre-Lesson Instructions:

Study and discuss the effects of inventions upon society.

Materials/Equipment/Technology:

Access to Internet, encyclopedias, books, other resources

Instructional Strategies/Procedures:

Students will use the Internet to supplement other resources for information needed to write and present a report of an inventor and his discovery. Direct students to go to the "Invention Dimension" at

http://web.mit.edu/afs/athena/mit.edu/org/i/invent

From there, go to "Inventor of the Week archives", and have students choose an inventor for their reports.

Student Evaluation:

Students present reports to class.

Follow-Up Activities:

Go back to the "Invention Dimension" homepage and select "The Invention Dimension Hotlist". From there, students may extend their learning from several choices including the "Wacky Patent of the Month."

Suggestions for Replications: None

Title: Weather in Your State

Author: Jenny Lee

School: Woodfin Elementary

Address: 108 Elk Mountain Road
Asheville, NC 28804

Phone Number: (704) 254-3166

Subject Areas: Science, Social Studies

Grade Level: 5

Time Required: 1/2 hour

NC Standard Course of Study Goals:

Students will use process and manipulative skills to learn energy concepts of Science.
Students will use technology as scientific inquiry to discover weather concepts.
The learner will analyze the impact on weather of absolute and relative location of states in the US.
The learner will evaluate ways the people of the US use, modify and adapt to the physical environment.
The learner will evaluate the effects of weather on the lives of people in the US.

Background Information/Pre-Lesson Instruction:

Discussion of weather forecasting , concepts and vocabulary.

Materials/Equipment/Technology:

Computer with Internet access and one activity sheet per student.

Instructional Strategies/Procedures:

1. At Web Crawler Search type in "**The Weather Channel Homepage**."
2. Click on "**The Weather Channel Homepage**" text.
3. Click on "**Weather Current Conditions**" (first box on screen).
4. Click on "**Current Conditions and Five Day Forecasts for over 1200 Cities**."
5. Click on the first letter of the state you chose for the Social Studies Project, or click on the state on the map.
6. Choose **three** cities in your state to research. Write the names of the cities and answer the following question: What are the current weather conditions for each city? (Make sure to note the temperature shown on the picture of the thermometer.)

EXTRA CREDIT:
Using the Web Crawler Search, find one fact about your state and copy it down. How did you find it?

Student Evaluation:

Student will be evaluated based on completion of research

Follow-up Activities:

Do a "forecast" for each state.
Create travel brochure on state.
E-mailed your weather questions to meteorologist in the U.S.
Perform a play about weather.

Suggestions for Replication:

Share with appropriate grade levels.

Title: In Search of Volcanoes

Author: Donna Craig

School: New Hope Elementary

Address: 137 Stowe Road
Gastonia, North Carolina 28056

Phone Number: (704) 824-1617

Subject Areas: Science, Social Studies, Computer Skills

Grade Level: 5

NC Standard Course of Study Goads:

Science 5.5
Social Studies 3.1, 3.2, 4.1, 4.2, 4.3
Computer Skills 1.2

Background Information/Pre-Lesson Instructions:

Study of volcanoes, including causes and likelihood of occurrence in particular areas of the world

Materials/Equipment/Technology:

Access to Internet, a large world map on a bulletin board, pushpins

Instructional Strategies/Procedures:

Students will use the Internet to locate volcanic eruptions around the world and will indicate their locations on a world map. About once a week, have students check the Internet to update the map for volcanic activity. Direct students to go to "Volcano World" at **http://volcano.und.nodak.edu/**
From the homepage, go to "What is Volcano World?", and then to "Update on volcanic activity." Have students find the current sites on the world map. Place a pushpin at the new sites. Include on the map the dates of the eruptions or activity at the sites.

Student Evaluation:

Students will be able to determine where most volcanic activity takes place in the world.

Follow-Up Activities:

Go back to "Volcano World" homepage. From there, students may extend their learning from several choices, including a volcanoes contest that tests students' knowledge of volcanoes.

Suggestions for Replication:

None

Title: ERUPTION TOURS, A STUDY OF VOLCANOES

Author: Lou Doss

School: Brookside Elementary

Address: 1950 Rhyne Carter Road
Gastonia, NC 28054

Phone Number: (704) 866-6283

Subject Areas: Social Studies, Science, Communication Skills, Computer Skills, Mathematics

Grade Level: 5

Time Required: 1 month

NC Standard Course of Study Goals:

Science: Goal 5; 2.1, 5.4
Communication: 2.1, 2.2
Information: 1.5, 2.1, 2.2
Computer: 2.1, 2.3, 2.6, 3.1, 3.2
Mathematics: Goal 6; 6.1, 6.2

Background Information/Pre-Lesson Instructions:

Located on attached unit, listed as Situations and Interactions.

Materials/Equipment/Technology:

Located on attached unit, listed as Tools.

Instructional Strategies/Procedures:

Located on attached unit, listed as Tasks, and The Assignment.

Student Evaluation:

Located on attached unit, listed as Assessment.

Follow-Up Activities:

Located on attached unit, lists as Phase 4, Extra Activities.

Suggestions for Replication: None

ERUPTION TOURS

A Study of Volcanoes

Coordinated by
Lou L. Doss
Brookside Elementary
1950 Rhyne Carter Road
Gastonia, NC 28054
(704) W/866-6283 H/867-1043
msdossl@ix.netcon .com

Unit Of Practice

Situations

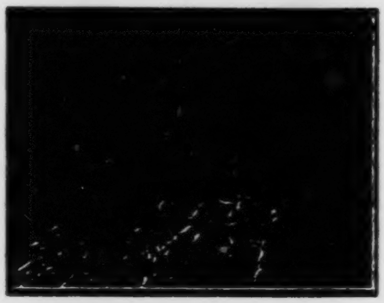
Prior to the beginning of this unit, fifth grade students will have completed a volcano study using *Windows On Science*, textbook materials, and Mount St. Helen's Home Page. Students working in teams, will investigate volcanoes in the classroom, computer lab, and media center during scheduled classes. The unit will take approximately one month to complete. Students may wish to continue portions of this unit on their own.

Interactions

Students will work in teams consisting of four classmates. Each team will research active volcanoes located on an assigned continent. Following research, students will work cooperatively to develop a *HyperStudio* stack for class presentation. Students will also interact through online activities that include a volcanologist, volcano contest, and a volcano hunt with a local school.

Tools

Students will have access to a networked lab with an Internet account and a web browser, such as *Netscape*; Windows; software, including *ClarisWorks*, *Microsoft Works*, *HyperStudio*; and a printer. Students will also utilize print, electronic, and telecommunication resources in the classroom and the media center for research.



Print materials

- encyclopedias, atlases, dictionaries
- Brownstone, David. *Natural Wonders of America.*
- Dineen, Jacqueline. *Volcanoes.*
- Dudman, John. *Volcano.*
- Jessop, Joanne. *Planet earth.*
- Knapp, Brian J. *Volcano.*
- Lampton, Christopher. *Volcano.*
- Ritchie, David. *The Encyclopedia of Earthquakes and Volcanoes.*
- Simkin, Tom and Lee Siebert. *Volcanoes of the World.*
- Thomas, Margaret. *Volcano!*
- Van Rose, Susanna. *Volcano and Earthquake*

Electronic Resources

- 1995 World Book Encyclopedia
- Compton's Interactive Encyclopedia
- Encarta Encyclopedia
- Grolier's Multimedia Encyclopedia

Telecommunications Resources

- E-mail
- Volcano World (http://volcano.und.nodak.edu/)
- Facts about Volcanos (http://volcano.und.nodak.edu/learning.html)
- Smithsonian Global Volcanism Program (gopher://nmnhgoph.si.edu)
- Bulletin of the Global Volcanism Network (gopher://nmnhgoph.si.edu:70/00/.docs/GVN/about)

Tasks

Students will research volcanoes on an assigned continent. Each team will be required to find the following information: name; type; latitude and longitude; elevation; location; date and description of eruptions; causes and effects; continent map; and graphics. Text will be

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entered in a word processing program with a spellcheck feature. Students will organize imported text and graphics in a *HyperStudio* Eruption Tour presentation for the class. Other enrichment activities include creating and entering data into a database for sorting and searching; analyzing and graphing data using a spreadsheet; pinpointing locations on a classroom map; entering an online contest; commuicating with an online volcanologist; and developing an online volcano hunt for sharing with a local school through e-mail. A student made test, including both open-ended and multiple choice questions, will conclude the unit.

Assessment

Throughout the unit, observation, a checklist, and rubric will be used to evaluate student participation, cooperation, and quality of work. During the Eruption Tour presentations, teams will evaluate themselves using the student developed rubric. Student created tests with an 80% mastery of all material will be considered as successful. The children's enthusiasm and demands for similar lessons will also deem this project successful.

Standards

"*Eruption Tours*" supports the North Carolina Standard Course of Study Guidelines to address the following curricular goals and objectives:

Science

Competency Goal 5: The learner will construct understanding of energy concepts.

2.1 Demonstrate the ability to communicate.

5.4 Investigate earth as a landform and explore forces affecting the land and water bodies of the earth over recent and geologic time.

Communication Skills

2.1 The learner will identify, collect, or select information and ideas.

2.2 The learner will apply, extend, and expand on information and concepts.

Information Skills

1.5 The learner will communicate reading, listening, and viewing experiences.

2.1 The learner will explore research processes that meet information needs.

2.2 The learner will engage in a research process to meet information needs.

Computer Skills

2.1 Use a word processing program to copy and move text.

2.3 Use a prepared database to enter and edit data.

2.6 Use commercial software in various subject areas.

3.1 Use a word processing program to publish a report that contains centering, tabs, and more than one paragraph.

3.2 Use telecomputing hardware and software to communicate with a distant computer or an online service.

Mathematics

Competency Goal 6: The learner will demonstrate an understanding and use of graphing, probability, and statistics.

6.1 Explain the kinds of decisions that need to be made in constructing graphs.

6.2 Systematically collect, organize, appropriately display, and interpret data both orally and in writing using information from many content areas.

In addition, students will acquire geographical knowledge.

The Assignment

A timeline will be developed for easy reference by the students.

Phase 1, Research (One Week)

- Working in teams of four, the students will decide cooperatively the volcano they wish to research on their assigned continent.
- Students will pinpoint their volcano locations on a classroom map.
- Students will research in the classroom, media center, and computer lab as scheduled.
- Students needing additional information will submit questions to an online volcanologist.

Phase 2 , Eruption Tour Preparation (One Week)

- Following research, teams will use a word processor and *HyperStudio* to produce an Eruption Tour containing the above information.
- Students will develop a rubric for evaluating teammates and themselves.
- Each team will submit at least twelve questions for use in the volcano hunt and testing.
- Students will participate in an online volcano contest.

Phase 3, Presentations (One Week)

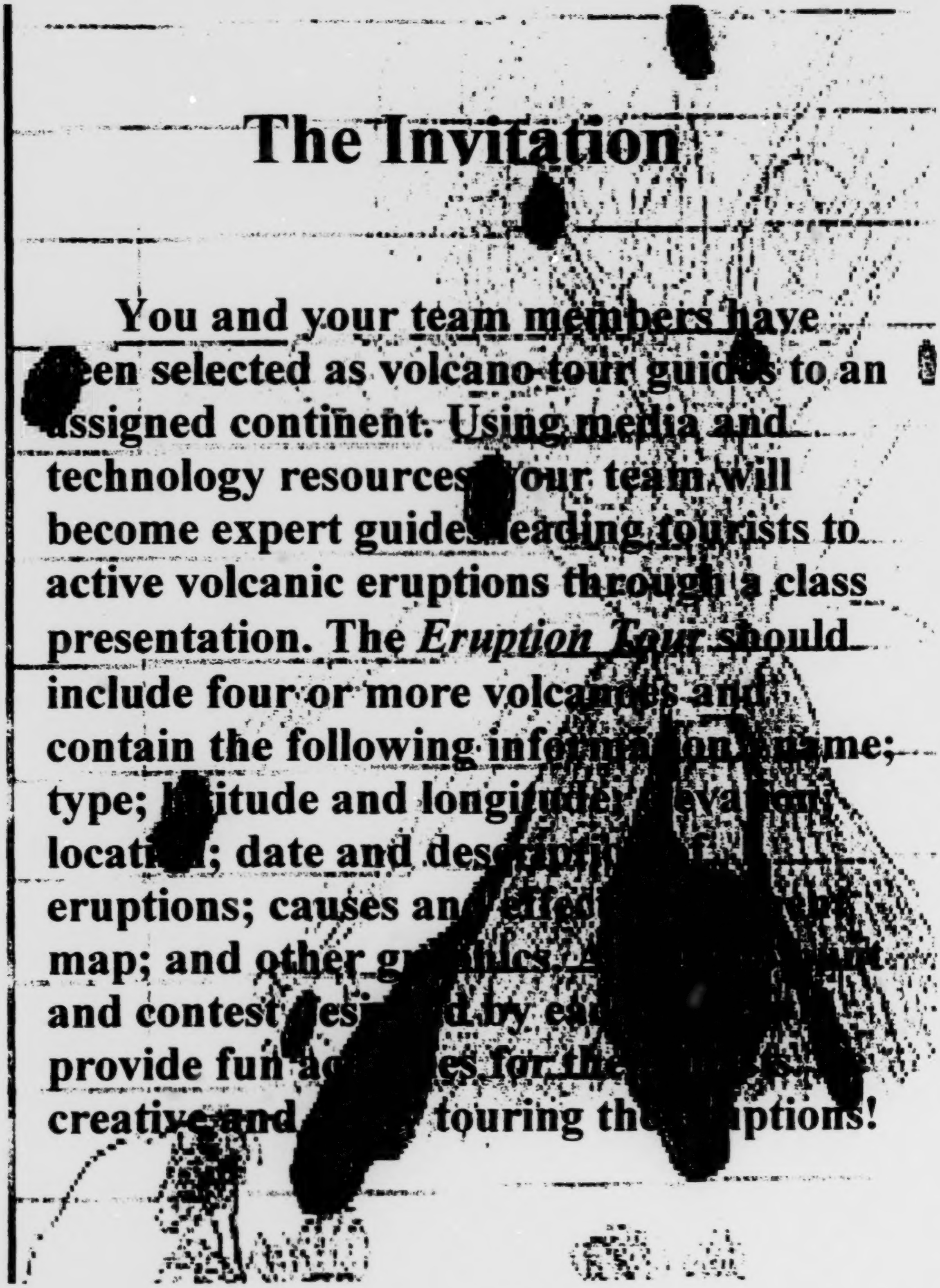
- Teams will present their information to their classmates.
- Students will complete team evaluations.

Phase 4, Extra Activities (One Week)

- Students will enter information into a database.
- Students will sort and search the prepared database.

- Students will enter tallied results into a spreadsheet.
- Students will graph, analyze, and printout results for classroom display.
- Students will participate in an online volcano hunt by exchanging and answering questions with a local school via e-mail.
- Students will take a test covering all teams' materials.

The Invitation



You and your team members have been selected as volcano-tour guides to an assigned continent. Using media and technology resources, your team will become expert guides leading tourists to active volcanic eruptions through a class presentation. The *Eruption Tour* should include four or more volcanoes and contain the following information: name; type; latitude and longitude; elevation; location; date and description of [illegible] eruptions; causes and effects; [illegible] map; and other graphics. A [illegible] and contest designed by each [illegible] provide fun activities for the tourists. [illegible] creative and [illegible] touring the eruptions!

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Title: In Search of Earthquakes

Author: Donna Craig

School: New Hope Elementary

Address: 137 Stowe Road
Gastonia, North Carolina 28056

Phone Number: (704) 824-1617

Subject Areas: Science, Social Studies, Computer Skills

NC Standard Course of Study Goals:

Science 5.5
Social Studies 3.1, 3.2, 4.1, 4.2, 4.3
Computer Skills 1.2

Background Information/Pre-Lesson Instructions:

Study of earthquakes, including causes and likelihood of occurrence in particular areas of the world

Materials/Equipment/Technology:

Access to Internet, a large world map on a bulletin board, pushpins

Instructional Strategies/Procedures:

Students will use the Internet to locate recent earthquake activity around the world, and will indicate their locations on a world map. At least once a week, have students check the Internet to update the map for seismic activity. Direct students to go to the "National Earthquake Information Center" at **http://wwwneic.cr.usgs.gov/**
From the homepage, go to "Current Seismicity Information", and then, FINGER
quake@gldfs.cr.usgs.gov
Have students find the updated sites on the world map. Place a pushpin at the new sites. Include on the map the dates and magnitude of the earthquakes.

Student Evaluation:

Students determine where most earthquake activity takes place in the world.

Follow-Up Activities:

Go back to the "National Earthquake Information Center" homepage. From there, students may extend their learning from several choices of sites to visit.

Suggestions for Replication: None

Title: Arctic Circle

Author: Linda J. Kubik

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown School Road
Hillsborough, NC 27278

Phone Number: (919) 732-6138

Subject Areas: Math, Social Studies, Technology

Grade Level: 5 and above

Time Required:

This activity takes approximately 5-6, 45-minute class periods depending upon computer access time.

NC Standard Course of Study Goals:

Math

Goal 2: The learner will use geometric concepts and spatial visualization to estimate results and solve problems.
Goal 4: The learner will understand and use standard units of metric and customary measure.

Social Studies

Goal 1: The learner will analyze characteristics of peoples of the Western Hemisphere.
Goal 3: The learner will locate major physical features and suggest the influence of location on life in the Western Hemisphere.
Goal 4: The learner will assess the significance of the physical and cultural characteristics of regions within the Western Hemisphere.
Goal 5: The learner will evaluate ways the people of the Western Hemisphere use, modify and adapt to the physical environment.

Background Information/Pre-Lesson Instructions:

Begin collection of sugar cubes a month or so in advance of starting this activity so you will not run out in the middle of the building stage.

Materials/Equipment/Technology:

Graph paper, pencils, scavenger hunt sheet, a minimum of 1 box of sugar cubes or tablets per student, sturdy paper or styrofoam plates for bases, Elmer's white glue, yardsticks, tape measures and access to the World Wide Web.

Instructional Strategies/Procedures:

1. Students will research the Arctic Circle Region by completing the Internet Scavenger Hunt of related web sites. Related Web sites:
Arctic Circle located at
http://www.lib.uconn.edu/Arctic Circle/index.html

First Nations located at
http://schoolnet2.carleton.ca/english/ext/aboriginal

Canada First Nations at
http://indy4.fdl.cc.mn.us/~isk/canada/canada.html

and Nunavut at
http://www.nunanet.com/~nic/

2. Students will practice math skills related to the concepts of height, width, and volume by constructing a model igloo to scale in a simulation activity using sugar cubes or tablets and glue.
3. Students will practice using graph paper as a tool for planning the construction of their igloo by drawing an aerial view and a frontal view before beginning to build their scale model.

The Arctic Challenge

Construct a temporary shelter, an igloo, for your hunting and whaling party to survive in a blizzard for 4-5 days on the open ice of the Arctic hunting grounds. Your party must be able to at least sit up inside your structure. You may choose to have enough space to stand or lie down within your igloo.

The model will be built to scale using sugar cubes to represent blocks of ice you have cut from the area around you. Each sugar cube will represent a block of ice that is 1 ft. wide by 1 ft. tall by 1 ft thick.

Determine the space needed within your igloo using the measuring tools available to you. (What is the volume inside your igloo?)
What will be the outside dimensions of your igloo? (What is the height and width of the outside walls?)
Using the graph paper draw an aerial view of your structure.
Using the graph paper draw a view of your igloo from the front.
When these drawings have been checked by your teacher, you may begin to construct your igloo.

Student Evaluation:

1. Students' ability to find information will be monitored by teacher as they complete the Scavenger Hunt Sheet.
2. Students' math skills will be evaluated in the accuracy of their graph

drawings and the quality of their model igloos.
*Note: Some students get carried away with elaborate constructions which go outside the parameters of the problem. Staying within the guidelines should be part of the evaluation.

Follow-Up Activities:

Students can compare and contrast their models. Discussions of the problems encountered can help clarify math concepts. The difference between using sugar cubes instead of ice can be discussed.

Suggestions for Replication:

Students can work in pairs to explore the Arctic Circle Sites on World Wide Web. Some of the students can work on the computer or computers while others begin the drawings for their model. I have done this activity with 4 students in a group to cut the cost of the sugar cubes. Cubes should represent 1 ft. x 1 ft. x 1 ft. blocks of ice. Cubes relate more closely to the graph paper. However, I have done the activity with sugar tablets when cubes are not available. Tablets represent 1 ft. x 2 ft. x 1/2 ft. blocks of ice.

Title: MayaQuest

Authors: Linda J. Kubik

School: Grady A. Brown Elementary

Address: 1100 New Grady Brown School Road
Hillsborough, NC 27278

Phone Number: (919) 732-6138

Subject Areas: Social Studies, Communications, Math, Science

Grade Levels: 5 or above

Time Requirement: 12 weeks (Usually February - April)

NC Standard Course of Study Goals:

Social Studies

Goal 1: The learner will analyze characteristics of peoples of the Western Hemisphere.

Goal 2: The learner will assess the influence of major religions, ethical beliefs, and aesthetic values on life in the United States and Latin America.

Goal 3: The learner will locate major physical features and suggest the influence of location on life in the Western Hemisphere.

Goal 4: The learner will assess the significance of the physical and cultural characteristics of regions within the Western Hemisphere.

Goal 5: The learner will evaluate ways the people of the Western Hemisphere use, modify, and adapt to the physical environment.

Science

Goal 1: The learner will understand the nature of science.

Goal 2: The learner will use process skills to solve authentic science problems.

Goal 4: The learner will engage in authentic scientific inquiry.

Goal 5: The learner will investigate energy concepts as related to the Maya culture.

Math

Goal 5: The learner will solve problems and reason mathematically.

Goal 6.2: The learner will systematically collect, organize, appropriately display and interpret data using information from many content areas.

Communications

Students will write literary, information, and practical texts to convey meaning, to learn, and to clarify thinking.

Goal 3: The learner will use language for critical analysis and evaluation.

Background Information/Pre-Lesson Instructions:

This program has been repeated annually over the past 2 years. It will be repeated again in 1997. Exploring the previous exhibitions is a good preparation for the upcoming expedition.

Materials/Equipment/Technology:

Minimum requirement is access to E-mail. Access to the Internet and/or purchase of the MayaQuest CD-Rom makes the program more visually exciting.

Instructional Strategies/Procedures:

1. Students correspond daily with a team cycling through the Yucatan peninsula to learn about the Maya culture and the field of archeology.
2. Students develop questions to ask experts in Maya studies who provide background for related areas of study and research.
3. Students try to answer the questions of the week and communicate with others participating in the project around the world.
4. Students will read about young people in a different part of the world and write an essay in which they compare and contrast the life of a Maya child with their own.
5. Students will develop research projects related to the exploration of this culture and area of the world (i.e. the rain forest, animals in the Yucatan, ancient religions, the Maya calendar, art in the region, herbal medicine, etc.)

Student Evaluation:

Student motivation will be assessed for each activity. Students' understanding of a different culture will be shown in the products produced. Students understanding of a different mathematical system will be demonstrated in reading the Maya calendar. Students written and research products will be shared with team members and other classrooms.

Follow-Up Activities:

A Chocolate Scavenger Hunt can be created and carried out through the Chocolate sites on the World Wide Web. Papier-mache masks can be created.
A model of a Maya temple can be constructed by students.
A variety of lesson plans can be accessed through the MayaQuest Home Page on the World Wide Web (**http://www.mecc.com/mayaquest.html**)

Suggestions for Replication:

The 1996 expedition pages illustrate the excitement this project has elicited from students following the program. The program will be offered "live" again in 1997.
Material is available for use by teachers and students on the Internet.
An entire Teacher Resource Packet may be purchased to utilize with this activity.
The MayaQuest CD-Rom is available for purchase to assist in teaching these materials.

Title: Meteorology

Author: Classroom Connect (submitted by Carol Horsley)

School: New Hope Elementary

Address:
137 Stowe Road
Gastonia, NC 28056

Phone Number: (704) 824-1617

Subject Area: Science

Grade Level: 6

NC Standard Course of Study Goals:

Science 6.6

Background Information/Pre-Lesson Instructions:

Materials/Equipment/Technology:

Personal computer with an Internet connection, including Web, gopher, and E-mail access
Art supplies, pencils and paper, or word processors
Printer and scanner (optional)

Instructional Strategies/Procedures:

1. Talk about how clouds are formed and introduce students to the different types of clouds.
2. Have students go on-line to find detailed information about the kinds and shapes of clouds (including dramatic phenomena such as hurricanes) and the elements that determine formations. They could also look for graphics of clouds. PSC Meteorology Program Cloud Boutique
URL: **http://vortex.plymouth.edu/clouds.html**
3. Instruct students to research what affects the Earth's weather system, and by extension, clouds (e.g., planet rotation, sunlight). Visit the WWW Library's Meteorology page for this step
URL: **http://vangogh.cs.tcd.ie/ugrad/projects/weather.html**
4. Take students on a tour of the atmosphere to find examples of the kinds of clouds they've studied.
Accu-Weather URL: **http://accuwx.com/www/welcome/sats.htm**

University of California, San Diego URL: **http://deimos.uscd.edu**
Blue Skies - Gopher to: **groundhog.sprl.umich.edu**
Purdue Weather Processor
URL: **http//thunder.atms.purdue.edu/index.html#main**

5. As a concluding project, have students write poems, essays, or stories about the kind of cloud they would like to be. They should explain how the cloud was formed and where it is located. They can paint or illustrate their writings. (For the extension, you'll need a scanner to transfer artwork done on paper to a computer.)

Extension:
Have the class create its own cloud Web page incorporating the materials from this project. You can send your Web pages to Classroom Connect for mounting on the World Wide Web.
E-mail to: **classweb@wentworth.com**
Type Our Cloud Home Page in the subject line.

Student Evaluation:

Students should be able to:
Identify the types of clouds and explain how they are formed.
Use the Internet as a research tool (World Wide Web, gopher, and E-mail).
Apply new knowledge in creative ways through writing and artwork.
Create pages for publication on the World Wide Web (optional).

Follow-Up Activities:

None

Suggestions for Replication:

None

Title: Endangered Species Activity

Author: Dick Shaw

School: Cook Middle School

Address: 920 11 St. NW
Winston-Salem, NC 27105

Phone Number: (910) 727-2784

Subject Area: Science

Grade Levels: 6-8

Time Required: 1 Period

NC Standard Course of Study Goals:

6th Grade - Goals 1,2,3,4,5,6
7th Grade - Goals 1,2,3,4,5,6
8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

Are there any endangered species that live in the tropical rain forest?

Materials/Equipment/Technology:

1. A computer
2. An Internet Connection
3. Netscape or other Internet Browser
4. Desktop publishing program such as Classroom Publisher
5. A printer (preferably a Laser Printer)

Instructional Strategies/Procedures:

1. Use the Internet* to identify any endangered species of plants and animals that live in the tropical rain forest and produce a document that will convince the public to be sympathetic toward their plight.
2. Compile a database of these plants and animals.
3. Capture a picture** of a typical endangered animal and make a poster using the **Classroom Publisher***** that will have a supportive impact on anyone who sees it.
4. Repeat activity 3 for a typical plant.

*The following Internet addresses will have data that you need.

http://www.wcmc.org.uk/cgi-bin/rl_anml.pl

http://www.wcmc.org.uk/data/database/rl_anml_combo.html

http://www.nceet.snre.umich.edu/EndSpp/ES.bio.html

You may capture any picture that is on the monitor by holding down the **shift key, the **command key** (the key with the apple on it) and pressing the **3 key** once. (You should hear a shutter click if you are successful.) The picture will be saved as a PICT file on the hard drive. (Examples: Picture 1, Picture 2, etc.)

If you have a scanner, you may scan any pictures of endangered species that you have seen in magazines or other printed material.

*****Instructions for importing an image using The Classroom Publisher:**

1. Start The Classroom Publisher by double clicking on the **Classroom Publisher Icon** on the desktop.
2. Click on the **New Document** button.
3. Click and hold the mouse button down on the **File** menu at the top of the screen.
4. Drag the mouse to highlight **Import**.
5. Click on **Desktop**.
6. Double click on **Macintosh HD**.
7. Scroll the list until you see **Picture 1**. (or whatever the number of the last picture)
8. Double click on this picture.
9. You can now follow the directions to import, cut and paste the picture onto your new document.
10. To print the document, click and hold the mouse on **File** and drag to **Print** and release the mouse button. Click on the **Print** button when the next screen appears.

Student Evaluation:

Ability to identify, find, and capture pictures of endangered species.
Ability to produce a desktop publishing document that will influence the public to be sympathetic toward endangered species.

Follow-Up Activities:

Do periodic Internet searches to find the most current status of the species that the students have identified.

Suggestions for Replication:

Title: Plotting Earthquake Locations

Author: Dick Shaw

School: Cook Middle School

Address: 920 11 St. NW
Winston-Salem, NC 27105

Phone Number: (910) 727-2784

Subject Areas: Science and Social Studies

Grade Levels: 6-8

Time Required: One to six weeks

NC Standard Course of Study Goals:

6th Grade - Goals 1,2,3,4,5,6
7th Grade - Goals 1,2,3,4,5,6
8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

Where do most earthquakes occur?

Materials/Equipment/Technology:

1. A Macintosh computer
2. An Internet Connection
3. Netscape or other Internet Browser
4. A printer
5. A world map with latitude and longitude lines on it
6. Colored markers

Instructional Strategies/Procedures:

1. Download the current seismicity list from the following location:
   http://quake.wr.usgs.gov/QUAKES/CURRENT/current.html
2. Plot the location of each earthquake on a world map using latitude and longitude.
3. Create a legend that indicates the magnitude of each plot.
4. Use the legend to show the magnitude at each location.
5. Repeat steps 1-4 weekly for 6 weeks.

ASSIGNMENT:

Compare your plots with those of your classmates.

Combine all of the plots onto a single map.

Identify several areas in the World that you would not want to live as a result of this assignment.

Write a paper that explains your ideas about why earthquakes occur at the locations you have plotted.

QUESTIONS:

Where do most of the earthquakes occur?

Can you see any relationships between land masses and earthquake locations?

When you combined all of the plots, did you change your mind about the locations?

Do any earthquakes occur under the oceans?

Student Evaluation:

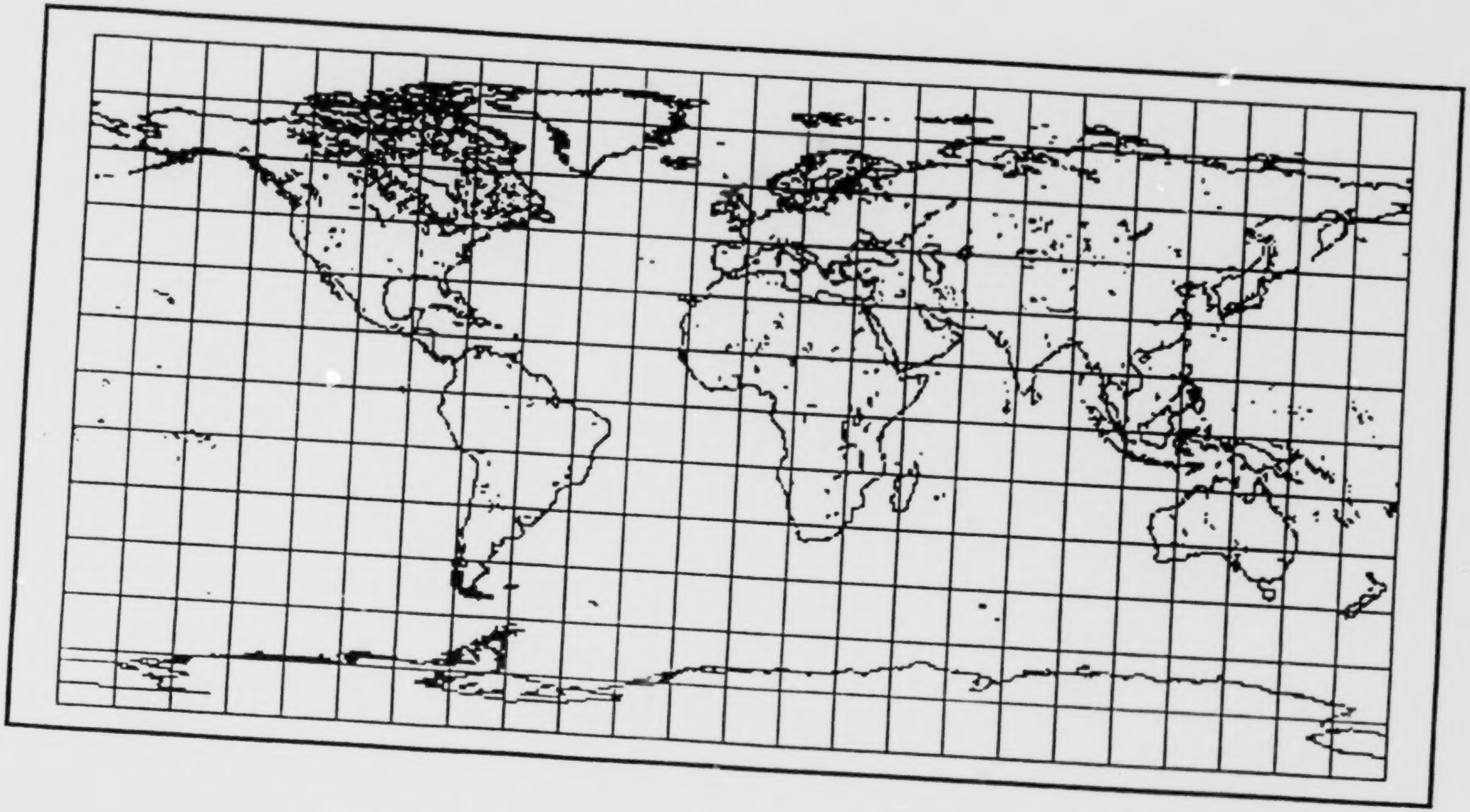
Ability to correctly plot the earthquake locations.
Ability to create a legend and use it correctly on a map.
Interpretation of findings.

Follow-Up Activities:

Use the Internet to find the frequency and magnitude of earthquakes that occur in your region and state.

Suggestions for Replication:

This activity can be used as a long term (full year) project in most Social Studies and Science Classes.



```
Login name: quake                        In real life: see Ray Buland
Directory: /home/gldfs/quake             Shell: /home/gldfs/quake/run_quake
Last login Thu Sep 21 20:25 on ttyp1 from 132.20.128.128
New mail received Thu Sep 21 19:05:08 1995;
  unread since Thu Sep 21 09:12:23 1995
Plan:
The following near-real-time Earthquake Bulletin is provided by the National
Earthquake Information Service (NEIS) of the U. S. Geological Survey as part of
a cooperative project of the Council of the National Seismic System.  For
a description of the earthquake parameters listed below, the availability of
additional information, and our publication criteria, please finger
qk_info@gldfs.cr.usgs.gov.
Updated as of Thu Sep 21 20:00:53 MDT 1995.

 DATE-(UTC)-TIME     LAT     LON      DEP   MAG  Q   COMMENTS
yy/mm/dd hh:mm:ss   deg.    deg.      km
95/09/20 23:32:47  35.73N 117.69W    5.0 3.9Ml C   CENTRAL CALIFORNIA
95/09/20 23:37:31  35.73N 117.65W    5.0 3.8Ml A   CENTRAL CALIFORNIA
95/09/20 23:53:08  35.65N 117.64W    5.0 2.8Ml A   CENTRAL CALIFORNIA
95/09/20 23:56:58  35.73N 117.63W    5.0 3.7Ml A   CENTRAL CALIFORNIA
95/09/21 00:16:42  35.76N 117.61W    5.0 3.2Ml A   CENTRAL CALIFORNIA
95/09/21 00:31:24  35.70N 117.67W    5.0 2.7Ml A   CENTRAL CALIFORNIA
95/09/21 03:09:50  35.72N 117.62W    5.0 3.2Ml A   CENTRAL CALIFORNIA
95/09/21 05:10:13  35.71N 117.68W    5.0 2.8Ml A   CENTRAL CALIFORNIA
95/09/21 05:17:35  19.85S 168.77E   33.0 5.0Mb C   VANUATU ISLANDS
95/09/21 07:09:28  35.64N 117.67W    5.0 2.7Ml A   CENTRAL CALIFORNIA
95/09/21 07:29:13  35.69N 117.62W    5.0 3.0Ml A   CENTRAL CALIFORNIA
95/09/21 07:46:53  35.74N 117.64W    5.0 3.8Ml A   CENTRAL CALIFORNIA
95/09/21 07:57:41  35.72N 117.61W   10.0 4.1Ml A   CENTRAL CALIFORNIA
95/09/21 08:46:54  39.46N  20.44E   10.0 4.2Mb B   GREECE-ALBANIA BORDER REGION
95/09/21 09:06:14  64.98N 149.05W   14.0 4.0Ml     CENTRAL ALASKA
95/09/21 10:45:15  16.92N  98.57W   33.0 4.3Mb B   NEAR COAST OF GUERRERO, MEXICO
95/09/21 10:52:53  18.45N 101.06W   33.0 4.4Mb B   GUERRERO, MEXICO
95/09/21 14:11:18  35.70N 117.60W    5.0 3.8Ml A   CENTRAL CALIFORNIA
95/09/21 14:21:56  33.40N 118.11W    5.0 3.0Ml A   SOUTHERN CALIFORNIA
95/09/21 20:32:57  63.84N 179.33E   10.0 4.9Mb B   EASTERN SIBERIA, RUSSIA
95/09/21 23:52:40  36.66N  26.73E  150.0 4.8Mb B   DODECANESE ISLANDS
```

```
Login name: quake                        In real life: see Ray Buland
Directory: /home/gldfs/quake             Shell: /home/gldfs/quake/run_quake
Last login Mon Mar 25 07:54 on ttyp0 from kaos.deepcove.co
New mail received Mon Mar 25 07:30:20 1996;
  unread since Thu Mar 21 10:41:56 1996
Plan:
The following near-real-time Earthquake Bulletin is provided by the National
Earthquake Information Service (NEIS) of the U. S. Geological Survey as part of
a cooperative project of the Council of the National Seismic System.  For
a description of the earthquake parameters listed below, the availability of
additional information, and our publication criteria, please finger
qk_info@gldfs.cr.usgs.gov.
Updated as of Mon Mar 25 07:54:04 MST 1996.

 DATE-(UTC)-TIME     LAT     LON      DEP   MAG  Q
yy/mm/dd hh:mm:ss   deg.    deg.      km
96/03/22 10:30:26  16.12N  97.88W   33.0 4.8Mb B
96/03/22 14:44:15  51.42N 178.84E   33.0 4.5Mb C
96/03/22 14:46:27  51.13N 178.90E   33.0 4.7Mb C
96/03/22 15:38:23  51.09N 178.79E   33.0 5.0Mb A
96/03/22 17:17:04  51.10N 178.68E   33.0 4.5Mb B
96/03/22 17:31:06  35.27S 179.10W   33.0 5.8Ms B
96/03/22 18:45:25  26.34S  13.81W   10.0 5.1Mb B
96/03/22 20:22:13  41.76N  71.24W    5.0 3.5Lg
96/03/23 03:05:53   8.32N  72.68W  199.0 4.9Mb B
96/03/23 07:10:36  51.03N 156.93E   33.0 5.0Mb B
96/03/23 07:32:47  51.06N 176.61W   33.0 5.1Mb B
96/03/23 10:46:48  62.92S 163.06E   10.0 5.5Ms B
96/03/23 12:05:29  50.19N 178.52E   33.0 4.4Mb C
96/03/23 19:24:41  52.09N 170.50W   33.0 4.8Mb A
96/03/24 03:00:05  52.20N  29.84W   10.0 4.8Mb B
96/03/24 03:19:34  10.58N  62.59W   65.2 5.0Mb B
96/03/24 06:19:14  38.17N  26.76W   10.0 4.9Mb B
96/03/24 20:51:25  51.53N 178.81E   33.0 4.5Mb C
96/03/24 22:19:01  55.23S 146.25E   10.0 5.8Ms C
96/03/25 00:44:00  55.57N 161.54E   33.0 4.5Mb B
96/03/25 06:57:21  63.24N 150.55W  126.4 4.5Mb A
```

Title: How Do I get There

Author: Dick Shaw

School: Cook Middle School

Address: 920 11 St. NW
Winston-Salem, NC 27105

Phone Number: (910) 727-2784

Subject Areas: Science and Social Studies

Grade Levels: 6-8

Time Required: One to six weeks

NC Standard Course of Study Goals:

6th Grade - Goals 1,2,3,4,5,6
7th Grade - Goals 1,2,3,4,5,6
8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

How do we learn to use a road map to get from one place to another?

Materials/Equipment/Technology:

1. A Macintosh computer
2. An Internet Connection
3. Netscape or other Internet Browser
4. A printer
5. A road map of North Carolina and the United States
6. Highlight pen

Instructional Strategies/Procedures:

1. Access the following Internet Site: **http://www.automap.com**
2. Decide where you want to start your trip from and where you want to go.
3. Print out the step-by-step route instructions.
4. Use the highlight pen to plot the written directions on your map.

Student Evaluation:
Ability to locate the Internet site, use the interactivity and print their trip route.
Ability to correctly plot the route of their trip on a roadmap.

Follow-Up Activities:

Students can plot the routes to relatives for friends that live out of state.

Suggestions for Replication:

Title: Rain Forest Location Activity

Author: Dick Shaw

School: Cook Middle School

Address: 920 11 St. NW
Winston-Salem, NC 27105

Phone Number: (910) 727-2784

Subject Area: Science

Grade Levels: 6-8

Time Required: 2 Periods

NC Standard Course of Study Goals:

6th Grade - Goals 1,2,3,4,5,6
7th Grade - Goals 1,2,3,4,5,6
8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

Where are the world's rain forests located?

Materials/Equipment/Technology:

1. A computer
2. An Internet Connection
3. Netscape or other Internet Browser
4. A printer (preferably a Laser Printer)
5. Colored markers
6. A map of the world
7. Maps of the world's regions

Instructional Strategies/Procedures:

1. On a map of the world, outline the areas that contain rain forests.
2. Use a very light color of green to highlight these areas.
3. Use the enlarged regional maps to transfer the highlighted areas from the world map to the regional one.
4. On the regional maps, draw in the borders and label any countries that are located within the highlighted areas.

5. You may find information for this activity at the following locations:

http://fig.cox.miami.edu/Faculty/NickCarter/reinforests.html

http://www.nceet.snre.umich.edu/EndSpp/ES.bio.html

Questions:

1. What weather conditions determine where rein forests are located?
2. What is the weather like in the regions that you have outlined?

Student Evaluation:

Ability to identify, find, and capture pictures of endangered species.
Ability to produce a desktop publishing document that will influence the public to be sympathetic toward endangered species.

Follow-Up Activities:

Do periodic Internet searches to find the most current status of the species that the students have identified.

Suggestions for Replication:

Title: Toxic Landfill Sites Activity

Author: Dick Shaw

School: Cook Middle School

Address: 920 11 St. NW
Winston-Salem, NC 27105

Phone Number: (910) 727-2784

Subject Areas: Science

Grade Levels: 6-8

Time Required: One to six weeks

NC Standard Course of Study Goals:

6th Grade - Goals 1,2,3,4,5,6
7th Grade - Goals 1,2,3,4,5,6
8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

What does industry do with its toxic materials?

Materials/Equipment/Technology:

1. A Macintosh computer
2. An Internet Connection
3. Netscape or other Internet Browser
4. A printer
5. A regional map
6. Colored markers

Instructional Strategies/Procedures:

1. Use the Internet* and printed resources at your station to identify any toxic waste sites in your region.
2. Locate these sites on the map of your region.
3. Identify the types of toxins that are located at each site.

*The following Internet addresses will have data that you need.

http://ssrl01.slac.stanford.edu/7520A06.html

http://www.econet.apc.org/toxic/

http://www-ssrl.slac.stanford.edu/env.html

http://www-emtd.lanl.gov/TD/HotSpots.html#top

http://www.webdirectory.com/pollution

http://www.pes.com/pes/services.html

http://www.pharm.arizona.edu/superfund.html

http://cfc.crle.uoguelph.ca/%7Ejstorey/

4. Write a research paper that identifies the potential dangers at these sites.

5. Write a paper that offers alternative methods that will allow these toxins to be disposed of safely.

Student Evaluation:

Ability to locate the needed information on the Internet.
Correctly plotting the toxic site locations.
Written papers.

Follow-Up Activities:

Are any of the sites you have identified on the Federal Government's Superfund list? If so, when are they scheduled to be cleaned?

Suggestions for Replication:

Title: Weather Activity

Author: Dick Shaw

School: Cook Middle School

Address: 920 11 St. NW
Winston-Salem, NC 27105

Phone Number: (910) 727-2784

Subject Area: Science

Grade Levels: 6-8

Time Required: 1 Week

NC Standard Course of Study Goals:

6th Grade - Goals 1,2,3,4,5,6
7th Grade - Goals 1,2,3,4,5,6
8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

Can we use weather satellite photographs to predict the weather?

Materials/Equipment/Technology:

1. A computer
2. An Internet Connection
3. Netscape or other Internet Browser
4. Paint program software such as Aldus SuperPaint
5. A printer (preferably a Laser Printer)

Instructional Strategies/Procedures:

Students will be using The Internet to download satellite photographs of the Western Hemisphere. They will use these photos to label weather fronts, high and low pressure areas and system movement. After collecting a series of photographs, they will attempt to predict the weather for the next 24, 48, and 72 hours.

DOWNLOADING FROM THE INTERNET:

1. Turn on the computer and double click on the **NetScape Icon**.

2. Enter one of the following locations using **Open Location** from the Internet menu at the top of the screen:

   http://www.intellicast.com/
   http://cirrus.sprl.umich.edu/wxnet/
   http://www.serve.com/ds/wetter.htm
   http://meawx1.nrrc.ncsu.edu/

(If you cannot connect to any of these sites, do a search using weather satellite as the key words and you will find many sites that have the latest satellite photo.)

3. When the satellite picture has loaded, click on **File** from the top menu of **Netscape** and highlight **Save as** and then click on **Format** and save the photo as a **Source** file. (Be sure to give it a name with a date so you can call it up again.)

PREPARING THE PHOTOGRAPH FOR LABELING:

1. Close Netscape and double click on the **Superpaint Icon** (or start your graphics program).
2. Select **Open** from the **File** menu and click on the **Desktop** Icon.
3. Double click on **Hard Disk** and then double click on the correct **Picture File**.
4. Use the **outline** tool to select the portion of the picture you want to work with.
5. Click on the **Edit** menu and highlight **Copy**.
6. Select **New** from the **File** menu.
7. Select **Paste** from the **Edit** menu.
8. The selected part of the picture will appear and you can now use the **Text** and **Pencil** tools to label it.

LABELING THE PHOTOGRAPH:

1. Label the areas of the photograph that you think are high and low pressure areas with a capitol **H** and **L**.
2. Label with the **Pencil** tool the areas that you think represent weather fronts and identify them as either **cold** or **warm fronts**.
3. Use **arrows** to show the direction of the fronts and the movement of the high and low pressure areas.
4. Select **Save As...** from the **File** menu and give the picture its name and a date and **save it**.

PRINTING THE PHOTOGRAPH:

1. Double click on the **Graphics Icon**.
2. From the **File** menu, select **Open**.
3. Click on the correct picture file that you saved in the above section.
4. Click on **Open**.
5. From the **File** menu, select **Print**.
6. Click on **Print** at the top right of the print box.
7. Close the graphics program.

THE ASSIGNMENT:

1. Download and label two satellite photographs of the Western Hemisphere each day for 5 days in a row.
2. Place these photos in sequence on a poster board.
3. From your observations of the photographs, attempt to predict what the weather will be for the next 24, 48, and 72 hours.
4. From your observations, in what direction do most weather systems move in The United States? in North Carolina? in the Tropics?
5. What appears to be the wind direction around Low Pressure areas? around High Pressure areas?
6. Continue to download for another 10 days. Does the additional data help you to improve the accuracy of your answers to questions 4 and 5? Explain.

Student Evaluation:

Ability to download a satellite photo from the Internet.
Accuracy in identifying and labeling the satellite photo.
Rationale for predicting the weather visually.

Follow-Up Activities:

Use this same procedure to download visual satellite photos of North America from October through April . Students can see the snow line migrate south in the fall and north in the spring. A visual concept of the seasons is demonstrated.

Suggestions for Replication:

Title: Tree Ring Study and Comparison

Author: Dick Shaw

School: Cook Middle School

Address: 920 11 St. NW
Winston-Salem, NC 27105

Phone Number: (910) 727-2784

Subject Areas: Science and Social Studies

Grade Levels: 6-8

Time Required: 1 Week - 4 Weeks

NC Standard Course of Study Goals:

6th Grade - Goals 1,2,3,4,5,6
7th Grade - Goals 1,2,3,4,5,6
8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

Is there any relationship between the size of a tree ring and temperature/rainfall?

Materials/Equipment/Technology:

1. A computer
2. An Internet connection
3. Netscape or other Internet browser
4. A Printer
5. A tree ring (or rings) cross section from your area

Instructional Strategies/Procedures:

1. Students count the tree rings to see how old the tree is.
2. Students then compare the size of the tree rings to a graph of the average rainfall and temperature for those years.
3. The average rainfall and temperature can be downloaded from the following sites:

http://sercc.dnr.state.sc.us/products/climate_calendars/313630.html

http://www.ncdc.noaa.gov/cgi-bin/gcps/gradsscript2

QUESTIONS:

Do the size of the annual rings stay the same?

Can you see any relationship between the size of the rings and the average annual temperature?

Is the size of the rings affected by the average annual rainfall?

Student Evaluation:

Accuracy in identifying and counting rings.
Ability to compare the size of the rings to temperature and rainfall.

Follow-Up Activities:

Students may obtain tree rings from other parts of the region and do the same study.

Suggestions for Replication:

Title: Interdisciplinary Unit on China

Authors: Jesse Dilson, Pearl S. Buck

School: Lewis Chapel Middle School

Address:
2150 Skibo Road
Fayetteville, N.C. - 28314

Phone Number: (910) 864-1407

Subject Areas:

1. Advanced Communication Skills - Read - "The Good Earth" - Pearl S. Buck
2. Pre-Algebra - Model of an Abacus
3. Social Studies - Textbook - Read - "China and its Neighbors"
4. Science - The Wok

Grade Level: 7

Time Required:

Minimum time - 2-3 weeks (time varies from class to class). Time is focused around and coordinated with the social studies class discussion of "China".

North Carolina Course of Study Goals:

1. Communication Skills
Goal: 3, 3.1, 3.2, 3.3

2. Pre-Algebra
Goal: I, 1.2, 1.5

3. Social Studies
Goal: 1.3, 3, 3.1, 3.2, 4.2, 7.1, 7.2

4. Science
Goal: 2, 2.3, 2.4, 2.6

Background Information/Pre-Lesson Instructions:

Students will begin their background study of China by reviewing the materials available for that region and country. Related activities will be covered in each discipline.

Materials/Equipment/Technology:

Communication Skills: "The Good Earth" & its worksheet packet; notepaper & pencils for chapter summary & test.

Pre-Algebra: Cigar or shoe boxes, string (or substitute), beads ("The Abacus" by Jesse Dilson).

Social Studies: Trifold board with appropriate labeling; map of China (specifics to be determined by teacher).

Science: Graphs, chart, statistical data on Chinese food & its preparation

Instructional Strategies/Procedures:

1. Cooperative Learning
2. Computer Technology
3. Student Projects
4. Parental - Dress & Cooking
5. Media Reference Resources
6. Shared Group Learning
7. Bloom's Taxonomy

Student Evaluation:

1. Projects
2. Tests
3. Worksheets
4. Oral Presentation
5. Video Viewing
6. Computer Searches

Title: Native American Research

Author: Cameron Holbrook

School: Cook Middle School

Address: 920 11 St. NW
Winston Salem, NC 27105

Phone Number: (910) 727-2784

Subject Area: Social Studies

Grade Level: 8

Time Required: 1 Week

NC Standard Course of Study Goals:

8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

What has happened to the Native Americans of North Carolina since early settlement?

Materials/Equipment/Technology:

1. A computer
2. An Internet connection
3. Netscape or other Internet browser
4. A Printer

Instructional Strategies/Procedures:

Native Americans of North Carolina

Research Project - What is the current state of affairs for the Native Americans that live in North Carolina? What historical data exists that shows why these Native Americans are in their current situation?

Lots of information on the current status and historical background of Native American Tribes can be found on the Internet to supplement traditional research. WebCrawler searching can point you in lots of directions if you search for tribe name. A promising site is **http://www.vivanet.com%7Erawcomm/indecx.html**

Student Evaluation:

Research Paper

Follow-Up Activities:

Students may want to research other tribes in the United States and compare their situations to those of North Carolina.

Suggestions for Replication:

Title: Revolutionary War Activity

Author: Cameron Holbrook

School: Cook Middle School

Address: 920 11 St. NW
Winston Salem, NC 27105

Phone Number: (910) 727-2784

Subject Area: Social Studies

Grade Level: 8

Time Required: Varies

NC Standard Course of Study Goals:

8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

What type of songs did the people who lived during the Revolutionary War sing and why did they sing them?

Materials/Equipment/Technology:

1. A computer with audio out
2. An Internet connection
3. Netscape or other Internet browser
4. A Printer

Instructional Strategies/Procedures:

Revolutionary War era songs - In conjunction with a grade wide "Colonial Day", students use this site to access tunes and lyrics of songs that were sung during this era. They discuss the meaning and symbolism of the various songs. You can print a class set of the lyrics.

http://web2.xerox.com/digitrad/list/50

Students can access Revolutionary War data at:

http//q.continum.net/~histnact/revwar/revwar.html

Student Evaluation:

Ability to locate and identify songs of the era.
Ability to discuss the meaning and symbolism of the songs.

Follow-Up Activities:

Students may want to investigate the types of musical instruments that were played during this era.

Suggestions for Replication:

Title: Supreme Court Activity

Author: Cameron Holbrook

School: Cook Middle School

Address: 920 11 St. NW
Winston Salem, NC 27105

Phone Number: (910) 727-2784

Subject Area: Social Studies

Grade Level: 8

Time Required: 1 Week

NC Standard Course of Study Goals:

8th Grade - Goals 1,2,3,4,5,6

Background Information/Pre-Lesson Instructions:

How does the Supreme Court Function and what are its responsibilities?

Materials/Equipment/Technology:

1. A computer
2. An Internet connection
3. Netscape or other Internet browser
4. A Printer

Instructional Strategies/Procedures:

Students are assigned a mock case scenario and then use the Internet to gather precedent for their written briefs and oral arguments that they present.

Students hold a mock session of the Supreme Court and they argue their side for 30 minutes.

Helpful research sites are:

Decisions of the Supreme Court syllabi and opinions of actual cases since 1991 complete with a keyword and concept search.

http://www.law.cornell.edu/supct/index.html

USA Today's Supreme Court case listing - a much more readable source of information than the above source, although not as searchable.

http://www.usatoday.com/news/court/nscot000.html

Student Evaluation:

Written reports on their arguments.
Teacher evaluation on their oral arguments during the case presentation.

Follow-Up Activities:

You may want to do this same thing with some of our own state Supreme Court decisions.

Suggestions for Replication:

Title: Using SIMEARTH to teach planetary evolution

Author: Ron Strickland

School: John T. Hoggard High School

Address: 4305 Shipyard Blvd.
Wilmington, NC 28403

Phone Number: (910) 350-2072

Subject Area: Science

Grade Levels: Secondary, Primary

Time Required: Three weeks

NC Standard Course of Study Goals:

Science: 1.1, 2.1, 2.3, 2.4, 2.5, 2.9, 5.4

Background Information/Pre-Lesson Instructions:

Students should have a working knowledge of how to load files and access programs in the MS Windows environment.

Materials/Equipment/Technology:

IBM compatible computer, SIMEARTH program, educational package

Instructional Strategies/Procedures:

1. Introduce the SIMEARTH Program to the students. Explain how the series of simulations will apply to current studies and how the levels of complexity will increase as they progress from creating their planet to watching life develop on it, to finally manipulating environmental factors that will affect the course of life on their planet.
2. Each of the 10 simulations includes pre and post activities which add significantly to the understanding gained by the students.
3. Students can work in groups of 2 to 5; however, I found that in upper levels anything over 3 was counter-productive; often 3 was too many. The simulations can be shown on an overhead projection panel, but much is lost, as well as student interest.

4. Each simulation should be set up by taking the class through the pre-simulation activities which include questions and discussion. These can be guided or assigned.

5. Each simulation will generally last about 30 minutes, with some variation, depending on the interest level of the students.

6. Each simulation should be followed with a post-simulation activity, of which the teacher guide lists several. Many apply better to middle school than high school.

7. Care must be taken not to simply use the simulations as a set block of instruction. Student interest will lag quickly if they are doing this every day. The computer simulations cannot compete with video games and will require teacher input to achieve optimum success.

Student Evaluation:

Each simulation has a lab sheet included with it, as well as a take home assignment available. Teacher observation of the "HISTORY" window at the end of each simulation can provide input on how well each group is achieving its daily goals.

Follow-Up Activities:

1. This is very open to the teacher as the manual has several suggested activities for each simulation.

2. To carry these concepts into a social studies type environment, students could combine the biological and environmental aspects gained from SIMEARTH and carry it forward to an older program, SIMCITY, where the above concerns are dealt with, but also topics such as taxation and government programs.

Suggestions for Replication:

1. Be sure each group has a copy of the Instrumental Panel handout available at all times. The various Screens and Control Windows are very complex. Icons are small and may be very difficult to see on some monitors.

2. A minimum of 2 copies of each simulation is required for each group. To complete the series of simulations will require access to and a large amount of time at a copier.

3. The teacher manual states that it is not necessary for you to have done all of the simulations ahead of time yourself. This is true, but I found the success rate much higher for those simulations that I had worked through, not simply previewed.

Title: Using LandSat Images to investigate biomes

Author: Ron Strickland

School: John T. Hoggard High School

Address: 4305 Shipyard Blvd.
Wilmington, N.C. 28403

Phone Number: (910) 350-2072

Subject Areas: Science, Social Studies

Grade Levels: Secondary

Time Required: Three to five days

NC Standard Course of Study Goals:

Science: 1.1, 2.1, 2.3, 2.4, 2.5, 2.9, 5.4

Background Information/Pre-Lesson Instructions:

Students should have a working knowledge of how to load files and access programs in the MS Windows environment.

Materials/Equipment/Technology:

IBM compatible computer, Multispec program (available at MultiSpec on Internet)

Instructional Strategies/Procedures:

1. Introduce the Multispec program to the students, demonstrating how the different spectral bands are represented.
2. Load LandSat image of local area, downloaded from the GLOBE Project.
3. Conduct investigations of biome type and percent cover as inferred from images using the different heat signatures and surface albedos.
4. Each student will experiment with the 5 available color bands. There are 3 in the visible range as well as 2 in the infrared range. By using different combinations of the bands, the student will be able to "see" different biome types.
5. The student will determine which combinations produce the best image to analyze the image for a chosen biome type. Due to differences in heat signature and surface albedo, buildings, roads and such will show very differently under the different bands. Forests will show differently from grasslands.

Student Evaluation:

Completed Lab, correct combinations of color bands, identified local landmarks such as the school, Malls, industrial areas and local features such as the Cape Fear River and its tributaries.

Follow-Up Activities:

1. Look for other LandSat images that can be downloaded to investigate other areas of the country.

2. As future images become available, the student could attempt to compare succeeding years to observe the encroachment of urbanization on the forest and wetland biomes.

Suggestions for Replication:

1. Demonstrate the image manipulation to the class beforehand.

2. Use the "Area to Display" command under PROCESSOR/DISPLAY IMAGE to correct the image size when they "lose" their image by accidentally selecting a portion smaller than the whole image.

Title: Understanding Your Watershed

Author: Sandra D. Cecelski

School: John T. Hoggard High School

Address:
4305 Shipyard Blvd.
Wilmington, North Carolina 28403

Phone Number: (910) 350-2072

Subject Area: Oceanography

Time Required: One hour

NC Standard Course of Study Goals:

1. Understand and map a watershed.
2. Cooperative learning activity to brainstorm the relationship between upriver influences and coastal pollution problems.
3. Understand the importance of the estuary environment to the fisheries of North Carolina.
4. Utilize telecommunication technology with other schools throughout North Carolina.
5. Create a list of variables and possible questions for point source pollution.

Background information:

Provide students with an overview sheet containing watershed information.

Materials/Equipment/Technology:

Water quality monitoring equipment such as pH meter, dissolved oxygen meter, phosphate kit, nitrate kit, secchi disc, refractometer, wind/weather conditions, temperature meter, data collection tables, and clipboards. Technology equipment includes ALICE software (mapping and data log software designed specifically for this project), modem and computer.

Instructional Strategies/Procedures:

Students will work in teams collecting water quality data along the Lower Cape Fear River watershed. Upon returning to school, we will enter the data on the ALICE software data spreadsheet and using the modem share our data with five other schools selected to participate across the coastal plain of North Carolina. The program is called Estuary Net. The goal of the program is to create a network of water quality data on two particular watersheds of the North Carolina coastal plain, the Cape Fear and Neuse Rivers. The nationwide two year project is funded by the National Oceanic and Atmospheric Administration and the National Science

Foundation. The project is being implemented around the nation by the National Estuarine Research Reserve. There are 32 sites around the nation, one in North Carolina, participating in the program.

Student Evaluation:

My students will be evaluated with the completion of the project. We are assigned by the NCNERR to conduct several water quality tests seasonally along the banks of the Lower Cape Fear River over a two year period. We are supported by a watershed coordinator, Joanne Harkey, whose office is in Beaufort, North Carolina. Students will also be evaluated by their ability to collect the data accurately, create data tables using the ALICE spreadsheet program and to successfully communicate and share data with the five other North Carolina schools selected to participate in the program.

Follow-Up Activities:

I plan to continue the program in my class curriculum after the grant period has expired. Water quality is a primary objective in an oceanography course curriculum and will be continued using the same format.

Suggestions for Replication:

Water quality is a primary issue not only for the coastal plain of North Carolina, but also for every other part of the country. Exposure to the scientific and social aspects of this project, as well as the telecommunications aspects, can expand their horizons to help students cope with these and other problems facing their future.

Title: WhaleNet

Authors: Sandra Cecelski/Mike Williamson

School: John T. Hoggard High School

Address: 4305 Shipyard Blvd.
Wilmington, North Carolina 28403

Phone Number: (910) 350-2072

Subject Area: Oceanography

Grade Level: Secondary

Time Required: Full year

NC Standard Course of Study Goals:

1. Introduction and identification of various cetacean species
2. Mapping and plotting the ocean floor
3. Transfer of scientific data through telecommunications
4. Scientific observation skills using the metric system
5. Study of cetaceans in their ocean habitat.

Background Information/Pre-Lesson Instructions:

Provide students with an overview sheet containing information on whales and Whalenet.

Materials/Equipment/Technology:

Access to the Internet and WWW, standard data collection sheets

Instructional Strategies/Procedures:

Students embarked on a whale watch cruise and collected data using WhaleNet Survey sheets. JTH participated with two other North Carolina high schools to contribute data during and after the whale watch. Classes with Internet accounts submitted cetacean population data to Simmons College Vax via telecommunications.

To enhance scientific inquiry, many teachers take their classes on whale watches. Teachers participating in WhaleNet will collect data on the cetaceans that are seen on the whale watch trip; these data will be transmitted to the Marine bulletin board on the Simmons College VAX computer. The data accumulated by all classes during the 1995-96 school year will be used by the participants to further their knowledge and interest in cetaceans.

A standard data collection sheet will be used to collect the data. Once data are transmitted to the bulletin board, the data will then be available to interested participants for further analysis and classroom activities. In addition, this bulletin board has been used in our classroom for learning about marine science activities, opportunities, questions, and migratory patterns of various cetacean species.

Student Evaluation:

Individual activities will be assessed by teacher. Data collection sheets will be examined as well as E-mail correspondence.

Follow-Up Activities:

Many classroom activities have come about because of my affiliation with WhaleNet: My students have learned to use the computer with telecommunication to:

1. Plot latitude and longitude from Loran
2. Generate computer graphs and maps of species of cetaceans vs. location
3. Graph depth vs. location
4. Graph species, population number, vs. time of day.
5. Identify species.
6. Recognize behaviors.
7. Record over time...number of sighting vs. year.
8. Note how weather affects sightings and type of activity.
9. Collect general whale activities and resources off the World Wide Web.
10. Obtain coastal weather reports and relate to behavior.
11. Read and compare our data with other schools around the world who participate in WhaleNet.

Suggestions for Replication:

WhaleNet is an important resource which can be used by any school regardless of their proximity to coastal waters. In fact, access to this type of information may be one of the best demonstrations of the benefit of the Internet to K12 education.

Title: Greek Mythology

Author: JoAnn Isbell

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: English I

Grade Level: 9

Time required: 90 minute research period

NC Standard Course of Study Goal:

Background information for The Odyssey

Background Information/Pre-Lesson Instructions:

General discussion on the gods and goddesses about what the students already know.

Materials/Equipment/Technology:

Text – Prentice-Hall Gold ed. (9th grade literature book)
Reference books
Internet
Art

Instructional Strategies/Procedures:

Students searched for information on the gods using the Internet and one other research book. They then wrote a short paper and did an oral presentation to the class.

Student Evaluation:

Oral presentations of their written papers to the class.

Follow-Up Activities:

Have the students search for information on the Internet using one of the search engines such as Yahoo. (Since these students were novices, we used a lesson plan that had addresses for them to turn to.)

Suggestions for Replication:

Look for art work based on the myths.

Title: Greek Gods and Goddesses

Author: Carol Cutler, media coordinator

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: English Literature

Grade Level: 9

Time required: Minimum of 20 minutes per group

Objectives:

1. Learn Internet searching skills by looking for information on Greek gods and goddesses.
2. Become acquainted with Internet search engines.
3. Obtain information about Greek gods and goddesses.
4. Review Internet ethics and expectations in regard to pornography.

Background Information/Pre-Lesson Instructions:

World literature study - Greek mythology
Textbook

Materials/Equipment/Technology:

1. Computer with Internet connection
2. Netscape and bookmarked search engines
3. Other general reference sources

Instructional Strategies/Procedures:

1. Introduce students in cooperative learning groups to how to access the Internet via Netscape.
2. Demonstrate location of bookmarks.
3. Allow students to conduct two searches – (One general using the term Greek mythology and one more specific using the name of a specific god or goddess. Use two different search engines – (Yahoo and Alta Vista suggested.) Print results.

4. Note: Searches under Aphrodite reveal several sites which sound pornographic or "adult" - This leads to a good discussion of Internet ethics and the individual's responsibility to avoid such sites.

Student Evaluation:

Student written report which includes information from both Internet and more conventional sources.

Follow-Up Activities:

Oral reports on the Internet experiences and types of information available.

Suggestions for Replication:

Title:	Black Scientists
Author:	Carol Cutler
School:	Northside High School
Address:	7868 Free Union Road Pinetown, NC 27865
Phone Number:	(919) 943-6341
Subject Area:	Science
Grade Levels:	9
Time Required:	Minimum of 20 minutes per group

NC Standard Course of Study Goals:

1. Learn Internet searching skills by looking for information on black scientists.
2. Become acquainted with Internet search engines.
3. Obtain information about black scientists.
4. Recognize contributions of famous black scientists. (Black history month tie-in)

Background Information/Pre-Lesson Instructions:

Science textbook, black history materials

Materials/Equipment/Technology:

Computer(s) with Internet connection
Netscape and bookmarked search engines
Other general reference sources

Instructional Strategies/Procedures:

1. Introduce students in cooperative learning groups to how to access the Internet via Netscape.

2. Demonstrate location of bookmarks.

3. Allow students to conduct 2 searches – (One general using the term Black scientists and one more specific using the name of a particular scientist. Use two different search engines – Yahoo and Alta Vista suggested.) Print results.

Student Evaluation:

1. Student written reports which include information from both the Internet and more conventional sources.
2. Oral reports on the Internet experiences and types of information available.

Follow-Up Activities:

Expand the project to include other notable persons in conjunction with Black history month.

Suggestions for Replication:

This project can be easily repeated.

Title: The Legislative Branch Today

Author: Jeff Holcomb

School: John T. Hoggard High School

Address: 4305 Shipyard Blvd.
Wilmington, NC 28403

Phone Number: (910) 350-2072

Subject Area: Economic, Legal, and Political Systems

Grade Level: 9

Time Required:

Approximately two class periods total spanning several months. Time will be needed for discussion of current legislation, and the Internet will be needed to be checked repeatedly to track progress on proposed legislation.

NC Standard Course of Study Goals:

1.1, 1.5, 1.6, 2.2 ,2.3

Background Information/Pre-Lesson Instructions:

Students will look through current periodicals and identify current issues being debated in Congress.

Materials/Equipment/Technology:

Internet Access

Instructional Strategies/Procedures:

1. As a class assignment, have each student bring in an example of an issue on which Congress is considering action.
2. Have the class decide which issues they want to pursue. I would suggest no more than three.
3. Access "Thomas" (the Congressional Home Page)
   http://thomas.loc.gov/home/thomas.html
4. Click on "Hot Bills."
5. Check under the topics listed (abortion, etc.) and click on the appropriate ones.
6. Each topic has a "Digest" feature which gives a good summary of where a bill stands.
7. Repeat this process with the class over time to trace changes in the bill's status.

Student Evaluation:

Have students select one of the bills and write a paper on its key points.

Follow-Up Activities:

This will depend on the progress the bill makes. If a bill fails to become a law, students can debate why. If the Bill becomes law, students might look for impacts the new law has on society. Also, E-mail addresses for Congressmen are listed in Thomas. Students can directly contact their offices with questions.

Suggestions for Replication:

This project's success depends in part on how much progress a bill can make during the course of a school year. The more progress students see, the more "real" the project will become. However, even if a bill "languishes" in Congress (as is often the case) the students still have a great exercise in the legislative process.

Title:	Students and the Law	
Authors:	Jeff Holcomb	Ricki Peto
School:	John T. Hoggard High	Pasco High
Address:	4305 Shipyard Blvd. Wilmington, NC 28403	Pasco, Washington rpeto@oneworld.owt.com
Phone Number:	(910) 350-2072	
Subject Area:	Economics, Legal, and Political Systems	
Grade Level:	9	

Time Required:

Approximately three class periods; one to assign areas to research and begin gathering information; one to organize and send data to other schools; and a third period to discuss and compare data received from other schools.

NC Standard Course of Study Goals:

1.6, 2.5, 8.1, 8.2, 9.4, &10.3

Background Information/Pre-Lesson Instructions:

Students should brainstorm to identify legal areas that directly affect them. Examples might include: the legal rights of students at school concerning free speech, search and seizure laws, dress codes, and sex education policies.

Materials/Equipment/Technology:

E-mail connection and membership to a Listserver group

Instructional Strategies/Procedures:

1. Advertise your project via E-mail and listserver. Kidsphere is a very broad reaching one.

2. Coordinate a schedule with participating teacher(s) for sharing information. Allow plenty of time, but at least a month.

3. Have students exchange short introductory letters with participating schools, describing themselves and their community. Include the list of legal areas you would like to explore. Having students work in groups expedites things.

4. After receiving responses from other schools, create a list of common legal areas to research. Assign each area of research (students and free speech, students and locker searches, etc.) to a group of your students.

5. Exchange information via E-mail with participating schools.

6. Have your students compare and contrast how different communities and schools handle these legal issues. Ask students to explain any differences they see.

Student Evaluation:

A short paper summarizing the differences in local rules.

Follow-Up Activities:

Have students propose their own laws, with justification for their decisions.

Suggestions for Replication:

Obviously this project requires at least one participating school outside your immediate community. Contact can be made either by posting on a listserver, or checking the Internet for school homepages from areas of the country with which you might like to communicate.

Title: Touring the Executive branch: A Scavenger Hunt

Author: Jeff Holcomb

School: John T. Hoggard High School

Address:
4305 Shipyard Blvd.
Wilmington, NC 28403

Phone Number: (910) 350-2072

Subject Area: Economic, Legal, and Political Systems

Grade Level: 9

Time Required:

Approximately two class periods; one to explore the White House homepage and another to discuss findings.

NC Standard Course of Study Goals:

6.3, 7.1

Background Information/Pre-Lesson Instructions:

Students should be fully aware of the three branches of government, as well as the concepts of Separation of Power, and Checks and Balances.

Materials/Equipment/Technology:

An Internet connection. Netscape is an easy one to use. A lab with at least 5 computers on-line would help tremendously, but it can be done on one on-line unit.

Instructional Strategies/Procedures:

1. With the students divided into groups connect with Welcome to the White House (the White House Homepage)
   http://www.whitehouse.gov/wh/publications.html
2. Click on the "Independent Agencies and Commissions" icon.
3. Students will have a list of about 15 questions concerning the functions and responsibilities of the various executive agencies. This list of questions will vary in length and scope with your individual objectives, the type of student you have, and the amount of time you can devote. Sample questions: About how many products does the Consumer Product Safety Commission have jurisdiction over? Who is Chairman of the Federal Trade Commission? What are the three licensed disposal facilities used by the Nuclear Regulatory Commission for nuclear waste?

4. Each group will be given 25 minutes on the computer to find the answers to as many of your questions as they can find. If a lab with multiple on-line computers is not available, this activity will have to be done as part of a series of activities over about three days. For example, while a group is on the computer, the rest of the class can be researching other information on the executive branch at their desks.

Student Evaluation:

Give the class a quiz based on the original questions.

Follow-Up Activities:

Have students brainstorm for examples of how they are influenced by the various executive departments in their daily lives.

Suggestions for Replication:

The Welcome to the White House is an excellent source of current information on government. It is a very good means for researching current issues and the position of the President on current issues.

Title:	Drugs
Author:	Michael Proctor
School:	Northside High School
Address:	7868 Free Union Road Pinetown, NC 27865
Phone Number:	(919) 943-6341
Subject Areas:	Health
Grade Levels:	9
Time required:	Varies

NC Standard Course of Study Goals:

The student will understand the fundamental characteristics of drugs.

Background Information/Pre-Lesson Instructions:

A very basic lecture on drugs
Reading assignment in Health textbook (chapter on drugs)

Materials/Equipment/Technology:

Textbook and class notes
Computer with reference software
Reference materials in the library
Computer with Internet access

Instructional Strategies/Procedures:

Students divided themselves into groups of four. Each group was assigned nine different drug topics to divide among themselves. Each student was asked to research those topics and prepare a written report on each drug. When the students completed this task, they were to get back into their groups and teach their drug topics to the others in their group.

Student Evaluation:

The evaluation process included:

1. The students in each group were given an oral quiz on any drug that the group researched.
2. The written reports were graded.
3. A test was given on drugs at the end of the unit.

Follow-Up Activities:

I followed up the group research project with class discussion and an in-depth lecture on drugs.

Suggestions for Replication:

This group project can be repeated each year in my health class. The Internet access adds the possibility of securing more up-to-date information.

Title: Simple Organisms

Author: Charles Detmar

School: McMichael High School

Address:
6845 NC 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: Biology

Grade Levels: 9-10 (Honors)

Time Required: 1-6 weeks

NC Standard Course of Study Goals:

1. Students will become acquainted with materials available via the Internet.
2. Students will increase their knowledge about simple organisms.

Background Information/Pre-Lesson Instructions:

Class instruction/information pertaining to simpie organisms

Materials/Equipment/Technology:

Textbook and class notes
Computers with Internet access
Selected Internet addresses:

1. **http://ucmp1.berkeley.edu/cnidaria/cnidaria.html**
   (Introduction to the Cnidaria: Jellyfish, corals, and other stingers... This is a great site for high school kids!)
2. **http://128.200.5.5/**
   (WWW Server for Hydra at the University of California, Irvine... This site is just a directory to other sites that have information about Hydra and other critters.)
3. **http://128.200.23.66/library.html**
   (The Hydra Library ... This site attempts to put together all hydra references "ever" published.)
4. **http://ucmp1.berkeley.edu/platyhelminthes/** platyhelminthes.html
   (This site contains some basic information on Planaria, "flatworms," and some good links.)

Instructional Strategies/Procedures:

Selected Internet addresses given to students.
Time for Internet use is on independent basis.

Student Evaluation:

No formal evaluation – used as "motivator" to look further for additional information sources.

Follow-Up Activities:

Students were encouraged to find additional sites and to share addresses with other students/classes.

Suggestions for Replication:

Independent searching is good for advanced students.
Small group/individual searching is good for students needing a more controlled environment.
Can develop into an activity which will be part of a student's grade.

Title: The Global Village

Author: Audrey Parsons

School: McMichael High School

Address: 6845 NC 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: Geography

Grade Levels: 9-12

Time Required: 3-4 class periods

NC Standard Course of Study Goals:

4,5,6,7,8,9 (overview of all goals)
To increase the awareness of students as to living conditions, type of government, economics, etc. of countries around the world.
To provide up-to-date information on countries for which materials are inadequate due to outdated materials and textbooks or to the drastic changes in various countries around the world which have taken place within the past five years.

Background Information/Pre-Lesson Instructions:

1. Instruction relating to socio-economic, government of various countries.
2. Instruction in use of Netscape/Internet

Materials/Equipment/Technology:

1. Textbook
2. Reference materials
3. Computer with Internet access (Schedule use of Internet in media center for small groups)
4. Internet user policy form signed by parents
5. CIA World Fact Book 1995 ed. (available on Internet)
   http://www.odci.gov/cia/publications/95fact/index.html

Instructional Strategies/Procedures:

1. Give instruction in how to use the Internet.
2. Divide students into small groups (3-5).
3. Access the CIA World Fact Book.
4. Each group locates and prints information on their assigned country.

5. The group uses the information to write a report and prepare a visual. (Ex: chart, map, diagram, etc.)
6. Use the Internet to access any additional information needed to complete the project, such as pictures, flags, etc.
7. Written reports are prepared along with visuals for a class presentation by the group on their assigned country.

Student Evaluation:

Written assignments, visuals, and group presentations are evaluated based on teacher decision.

Follow-Up Activities:

1. Give additional assignments related to specific individuals of note for each country.
2. Locate possible key pals for students.
3. Use the links provided to explore additional countries or to compare conditions in a particular region or in various parts of the world.
4. Compare governments or economics of various countries or regions.

Suggestions for Replication:

1. Use for history and sociology classes.
2. Up-date addresses.
3. Include additional addresses for other sites relating to specific countries.
4. Initiate key pal communication.

Title: Spanish II Internet Project

Author: Mike Fitzpatrick

School: McMichael High School

Address: 6845 NC 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: Spanish II

Grade Levels: 9 - 12

Time Required: 2 - 3 hours

NC Standard Course of Study Goals:

7.2, 7.3, 7.4, 7.5,7.6,7.7

Background Information/Pre-Lesson Instructions:

General knowledge of Spanish speaking countries and previous research experience including database and Internet usage.

Materials/Equipment/Technology:

1. Activity detailing Internet addresses and specific information to collect from each site, economic, government, demographic information gathered from various print materials available in the media center.
2. Computers with access to Internet/World Wide Web.
3. Print information database.

Instructional Strategies/Procedures:

1. Students are divided into groups of 3 and given 45 minutes of time to access selected sites and to answer questions given in the activity.
   ~The Electric Mercado **http://www.mercado.com/**
   ~LatinoLink **http://www.lationlink.com**
2. Students work individually for 45 minutes to locate specific information about selected country using varied material available from sources in the media center.
3. After all information has been collected the group compiles findings into a group report and shares information with the class.
4. Class discusses the similarities of the Latino "Chupacabra" to the same creature as reported by other cultures.

Student Evaluation:

Evaluation will be based on length and depth of report and quality of presentation.

Follow-Up Activities:

Discussion of possibilities for Internet usage in future society.
Discussion of validity of information obtained from a variety of sources.
Use TESOROS OF THE WEB found in the monthly magazine HISPANIC to locate additional outstanding Latino sites.

Suggestions for Replication:

The activities worked well. Perhaps more in-depth research would spur increased student motivation. Locate sites of interest to students (music, etc.). This project can be modified for use in geography.

Espanol 2
Internet project

The Electric Mercado

-open Internet address **http://www.mercado.com/**

-go to the **"Los puestos"** icon and find 3 items from 3 different puestos that you would buy and supply the following information:

Item 1: name of puesto:
price of item:
description:

Item 2: name of puesto:
price of item:
description:

Item 3: name of puesto:
price of item:
description:

-go to the **Que onda** or **Al andar** icon and find a magazine article that interests you. Supply the following information:

Magazine:
Title of article:
Author:
Brief summary:

-got to the **comida** icon and find a good recipe. Supply the following information:
recipe: Chef:
Description:

Espanol 2
Internet project

LatinoLink

-open Internet address **http://www.latinolink.com**

Is there really a **"Chupacabra"**? What is this creature? Where does it live? Where did it come from? Tell me all that you can about this phenomenon. Fill in at least the rest of this sheet with the skinny on the goatsucker.

Espanol 2
Profesor: Senor Fitz
Proyjecto de Investigacion # 1

Nombre: ____________________

Pais: ____________________

Grupo B: Informacion Demografica

1) Poblacion: ____________________

____

____

____

2) Ciudades: ____________________

____

____

____

3) Clima/Tierra : ____________________

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Otras notas de interes:

Espanol 2
Profesor: Senor Fitz
Proyecto de Investigacion # 1

Pais: ______________________________

Grupo A: Informacion del Gobierno

1) Tipo : ______________________________
____
____
____

2) Lider : ______________________________
____
____

3)Historia: ______________________________
____
____
____

Otras notas de Interes:

Title: Mathematicians

Author: Loma Morris

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: Math

Grade Levels: 9 - 12

Time required: Varies

NC Standard Course of Study Goals:

To collect and organize information about notable mathematicians by using library resources and the Internet
To share this information with others at Northside

Background Information/Pre-Lesson Instructions:

Discussion of math history including a mention of several famous mathematicians and their contributions to the field of mathematics.

Materials/Equipment/Technology:

Computer with Internet access and word-processing software
Library reference materials

Instructional Strategies/Procedures:

Divide the class into several teams. Assign each team one of the mathematicians which were discussed in class along with others so that each team has several mathematicians to research. Ask each team to use library resources and the Internet as they find information about the person. They are to include a physical description of the person, what country the person is from, the time period in which the person lived, the person's contributions to the field of mathematics, among other things. (The more information – the better.)

Each team is to document the resources it uses in gathering this information; each team must try to find information on the Internet. Each team should compare the information it finds on the Internet with the information it finds in more traditional resources for accuracy. Each team should prepare a written report about each mathematician. As each team does its research, they should write down the names of any other mathematicians that they encounter. These could be added to the list at a later time.

Student Evaluation:

The teams will turn in written reports on several mathematicians.
The teams will present their research findings to the rest of the class.
The teams will save their reports in a word-processing program so that an information booklet can be printed.

Follow-Up Activities:

The students could play a game trying to guess the mathematicians before sharing information.
The students could play a game like stump the other teams by trying to find information about less well-known mathematicians.
The students could share this information with another class at Northside or with classes at other schools via the Internet (E-mail clues back and forth).
Math and science classes could do the project at the same time and play "Guess the scientist" and "Guess the mathematician" with each other.

Suggestions for Replication:

This type of project could be done about famous people in all areas, such as technology, science, medicine, presidents, history, etc. A similar team project could be done to find famous facts about the area in which one lives.

Title:	Art and Geometry
Author:	Rose Ann Pace
School:	Northside High School
Address:	7868 Free Union Road Pinetown, NC 27865
Phone Number:	(919) 943-6341
Subject Area:	Art
Grade Levels:	9 - 12
Time Required:	Varies

NC Standard Course of Study Goals:

To have students demonstrate relationships between art and math.

Background Information/Pre-Lesson Instructions:

Using the approach of curriculum integration, this lesson involves objectives relating math and art. The basic math concepts are from geometry and the art concepts relate to pattern development and repetition of images. Activities range from initial practice with creating tessellating shapes to creation of quilt patterns based upon tesselations, construction of three-dimensional forms based upon connected geometric shapes, and a culminating experience involving research using the Internet to study the work of popular artist M.C. Escher.

Materials/Equipment/Technology:

The art materials used in the unit are listed by lessons
The computer used was Macintosh
The Internet is not utilized in each lesson of the unit

Instructional Strategies/Procedures:

Lesson 1: Students will create examples of tessellations.
1. Given precut black and white triangles, squares, and rectangles the student attempts to arrange shapes into tessellations, discovering for themselves that not all shapes "tessellate."
2. Using only triangles (each student with a set of one type and size cut from black and white construction paper), students create a variety of tessellations.
3. Students create a two-color tempera painting of their tessellation pattern.

4. Given basic patterns, students create three-dimensional forms based upon connecting triangles from a variety of pre-decorated papers (choice of marbleized, paste, sponged, stamp printed papers). These are filled with rice to create "paper weights."

Lesson 2: Students will identify three basic traditional quilt patterns.
1. Show video on traditional quilts ... origin in colonial days, basis for designs, current trends.
2. Show examples of actual quilts and utilize community resource quilter(s) to demonstrate process of quilting at all stages.
3. Students research topic of "quilts" on the Internet.
Quilts, Counterpanes, Throws

http://www.si.edu/organiz

4. Students create paper quilt patterns using triangles cut from colored construction paper.
5. Students cut and construct by basic hand stitching one quilt square based upon triangles using 3 inch precut triangles of solid and calico print fabric.

Lesson 3: Students will recognize and describe three works incorporating math concepts by M.C. Escher.
1. Show Escher reproductions.
2. Research using Internet topics related to Escher

http://www.texas.net.Escher

Students assigned in small groups to answer questions about:
- a. Of what nationality was M.C. Escher?
- b. What was his vocational training?
- c. Tell three examples of how Escher used geometry in his art.
- d. Name one gallery or museum containing work(s) by Escher.
- e. Where can you order posters, shirts, etc. containing Escher's images?
- f. How can you find out more about Escher?

Student Evaluation:

Written assignments, group participation, finished products

Follow-Up Activities:

Suggestions for Replication:

This project can be easily repeated in future art classes.

Title: Decade Project

Author: Kristen Noland

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: French Culture and Civilization

Grade Levels: 10

Time Required: Varies

NC Standard Course of Study Goals:

Students will do research on a decade of French history.
Students will do research on the following topics:
historical events, famous people, scientific discoveries, art, music, literature, explorations, war and major conflicts, punishments, medical advancements, among others.

Background Information/Pre-Lesson Instructions:

Students had completed two-six weeks of French history on the block schedule when this assignment was made. This project was to allow them to research a time period and topics of interest.

Materials/Equipment/Technology:

Books, periodicals, and other reference materials
Computer with Internet access (Paris pages and CityNet)

Instructional Strategies/Procedures:

Students did most of the research in the school library using books, periodicals, etc. They took turns using the Internet.

Student Evaluation:

Students made a 20 minute presentation of projects to the class.

Follow-Up Activities:

Use/present projects in literature class.

Suggestions for Replication:

This project can be easily repeated. I kept video presentations to show to future classes.

Title:	Geography Exchange	
Authors:	Jeff Holcomb	Ron Hale
School:	John T. Hoggard High	Danum School
Address:	4305 Shipyard Blvd. Wilmington, N.C. 28409	Doncaster, England GeogClub@danum.demon.co.uk
Phone Number:	(910) 350-2072	
Subject Area:	World Geography and World Cultures	
Grade level:	10	

Time Required:

Approximately two class periods, with additional time outside the class for student research.

NC Standard Course of Study Goals:

World Geography - Potentially ALL goals
World Cultures - Goals 1, 2, 3, 4, 5, 8, 9

Background Information/Pre-Lesson Instructions:

Students should be well aware of the five basic geographic themes: Location, Place, Human-Environment Interactions, Movement, and Region.

Material/Equipment/Technology:

E-mail connection and subscription to a listserver

Instructional Strategies/Procedures:

1. Post your project on a listserver, such as Kidsphere.
2. Have students exchange short E-mail introductions with responding schools. It will help to have them work in small groups while doing this.
3. Divide your class into 5 groups and assign each group one of the five major themes of geography. Have your students research how their specific theme relates to their own community. Ask students to statistically support their conclusions, esp. with census data.
4. Exchange information with participating school(s).
5. Have students discuss similarities and differences between the responding locations.

Student Evaluation:

Students may be tested on information received from various participating schools, or students could be asked to complete a summarizing project, such as a short paper or a poster.

Follow-Up Activities:

Have students write a brief paper titled, "I would most like to live in..." and explain which of the participating schools has the most appealing geographic setting.

Suggestions for Replication:

Obviously, the trick to making this project work is finding other schools to participate. If you get no response off a listserver posting, try checking the Internet for the homepages of schools.

Title: Break of Day in the Trenches

Author: Gerri Carter

School: McMichael High School

Address: 6845 NC 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: English

Grade Level: 10 (Honors Level)

Time Required: Two weeks

NC Standard Course of Study Goals:

1. To increase the awareness of students as to how literature relates to historical and social events of a given time period.
2. To increase the awareness of the conditions endured by soldiers in W.W.I trench warfare.
3. To increase awareness of students validity of on-line teaching materials and the opportunity to share opinions with others on a global basis.
4. To provide opportunities for students to form opinions and analyze content of poem.

Background Information/Pre-Lesson Instructions:

Discussion of "All Quiet on the Western Front"

Materials/Equipment/Technology:

1. Poem by Isaac Rosenberg "Break of Day in the Trenches"
2. Internet User Policy form signed by parents
3. Computer with Internet access (Schedule use of Internet in media center for small groups.)
4. Internet address:
   http://info.ox.ac.uk:80/departments/humanities/rose/
5. E-mail access

Instructional Strategies/Procedures:

1. Give instructions in how to use the Internet.
2. Divide students into small groups (3-5).
3. Read poetry selection – "Break of Day in the Trenches."

4. Each group list first impression of the poem.
    ~Did you find it well written, emotive, imaginative?
5. List group opinions and give an analysis of the poem.
6. Use the Internet to record group opinions/analysis as provided by the site.
7. Respond to correspondence/feedback from site archivist.

Student Evaluation:

Written assignments, notes in notebook, group participation

Follow-Up Activities:

1. Use the links provided to explore the archive relating to Isaac Rosenberg, other writers, and the First World War.
2. Compare conditions of W.W.I with living conditions of soldiers in other armed conflicts. (Ex: George Washington's Continental Army, Civil War; Red Badge of Courage, Spanish-American War, Korean Conflict, Vietnam Conflict, Gulf War)

Suggestions for Replication:

This activity works best with small/cooperative groups.

Title: Notetaking for Research Project

Author: Betty Slade

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: Speedwriting for Notetaking / Study Skills

Grade Levels: 10 - 11

Time required: 90 minute block (30 minutes for each group)

NC Standard Course of Study Goal:

To use speedwriting for taking notes from the Internet for their research project concerning their career objectives.

Background Information/Pre-Lesson Instructions:

We discussed the Internet and the media coordinator demonstrated to students how to navigate, search, and explore the Internet. Students had previously practiced searching with the media coordinator and their teacher.

Materials/Equipment/Technology:

Computer
Internet
Research materials
Sample resume

Instructional Strategies/Procedures:

Students listed their career objectives and were divided into groups of 4-6. They assisted one another in the search for information concerning their career objectives. Students printed selected information and recorded the address where it was found. They took speedwriting notes from some selections and compiled an oral report of their findings.

Student Evaluation:

Evaluation consisted of grades on the final oral presentation, their notes, and their print outs.

Follow-Up Activities:

Students prepared resumes for future jobs.

Suggestions for Replication:

This type of project could be easily repeated in future classes and could also be done (without the speedwriting component) in career classes in the 7th and 8th grades.

Title: Developing Better Library Skills

Author: Betty Slade

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: Speedwriting for Notetaking / Study Skills

Grade Levels: 10 - 12

Time required: 90 minute block (30 minutes for each group)

NC Standard Course of Study Goal:

To introduce students to the Internet so that they can use it in future assignments.

Background Information/Pre-Lesson Instructions:

We discussed library skills and the technology that we have available in our library.

Materials/Equipment/Technology:

Computer
Internet
Media Specialist

Instructional Strategies/Procedures:

Media specialist was in charge of introducing students to the Internet. She asked each group to reach a consensus as to a topic in which they were interested. She then demonstrated for them how to navigate, search, and explore the web using Netscape, Yahoo, and Alta Vista.

Student Evaluation:

Student demonstrated to the media specialist and their teacher that they knew how to use the Internet by looking up various topics.

Follow-Up Activities:

Next unit involved researching career objectives.

Suggestions for Replication:

This type of project could be easily repeated in future classes.

Title: Research for Public Speaking Class

Author: Claudia Alligood

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Areas: Public Speaking

Grade Levels: 10 - 12

Time required: Varies (all semester)

NC Standard Course of Study Goals:

Students will research a variety of topics and prepare different types of speeches.

Background Information/Pre-Lesson Instructions:

Class discussion
Class notes on different types of speeches

Materials/Equipment/Technology:

Computer with Internet access
Word-processing program

Instructional Strategies/Procedures:

Have students use the Internet to find information on topics of their choice in order to prepare speeches for class. Students can use the word-processing program on the computer to take notes for their speeches or they can transfer the information to note cards.

Student Evaluation:

Student speeches and documentation of resources for information contained in their speeches.

Follow-Up Activities:

The follow-up activities to using the Internet for research to prepare speeches are endless. (My students used other reference materials in preparing their speeches, but they always wanted to check the Internet to see if they could find additional information there. They were always excited about checking this source of information. The only drawback to this was the fact that our school has a very limited number of Internet workstations.)

Suggestions for Replication:

Using the Internet as a tool for finding information for speeches can be incorporated not only in a public speaking class but in other English classes as well.

Title: Decisions for Healthy Food Choices

Author: Peggy Elliott

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Areas: Family and Consumer Science
Independent Living
Foods and Nutrition II

Grade Levels: 10 - 12

Time required: 5 school days (90 minute classes)

NC Standard Course of Study Goals:

021. Select foods that meet nutritional guidelines.

Background Information/Pre-Lesson Instructions:

Guide to Good Food text: chapter 2, pages 24 - 50 and chapter 3 "Making Healthy Food Choices," pages 52 - 68

Materials/Equipment/Technology:

Computer with Internet access
http://www.social.com/health/mlists.html
Word-processing program
Graphics and Publishing program
Poster board and markers
Video camera
Magazines
Guide to Good Food text (Largen/Bence: Goodheart Willcox)
CD-ROM Encyclopedias and CD-ROM Cookbooks
Weight Watchers magazine (July 1996): "What Can You Find When You Venture Into Cyberspace?" – pages 38 - 42

Instructional Strategies/Procedures:

Have students plan a "Healthy Food Choices Awareness Week" in your school. Have them prepare informational posters about the Dietary Guidelines for Americans and the Pattern for Daily Food Choices. Have them write articles for the school paper or create a paper of their own about American food habits, current health recommendations, and food product trends. Have them prepare self-tests and brochures about shopping for and preparing foods and eating out. Class members should distribute these materials to increase awareness of current food trends. Students can even prepare food samples of "Good Foods" and set up a display during lunch. Have them work with the cafeteria manager to introduce a few new healthful and appealing food options into the menu. Print attractive healthy food choices posters to be displayed in the cafeteria. Use the Internet for factual information from the "Food and Drug Administration" and to find other helpful information under a "health" search.

Student Evaluation:

1. Have students prepare simple fun evaluations such as a taste test having students sign a sheet if they liked a product.
2. Have students create a survey that polls the student body – number of surveys returned as an indicator of success.

Follow-Up Activities:

Students can compile information and videotape results or publish results for the student body. Test students with VOCATS covering this competency.

Suggestions for Replication:

This project can be repeated each year to keep students aware of nutritional needs and changing trends.

Title: Tour the Kilauea Volcano Region of Hawaii

Author: Lawson Greenwood

School: John T. Hoggard High School

Address: 4305 Shipyard Blvd.
Wilmington, NC 28403

Phone Number: (910) 350-0220

Subject Area: Earth Science

Grade level: 10-12

Time required: Two class periods

NC Standard Course of Study Goals:

6.1,7.3, 7.4, 7.5, 8.1, 9.1

Background Information/Pre-Lesson Instruction:

Students will have studied weather conditions, topographical maps, volcano conditions, and geology.

Materials/Equipment/Technology:

WWW access, overhead panel, overhead projector

Instructional Strategies/Procedures:

Students will visit Virtual Hawaii at web site

http://www.satlab.hawaii.edu:80/space/hawaii

Students will study Hawaii from the air and from the ground by using aerial maps and ground photography. The teacher will have a package of questions for each student group and will ask the students to study the aerial maps, volcano sites, and other information to answer the questions. Students will make predictions about volcano activity in other land masses.

Student Evaluation:

Students will assume the task of reporting on one area of investigation from Hawaii, i. e., aerial maps and elevation.

Follow-Up Activities:

Students will select other areas having favorable conditions for volcanoes and investigate these sites. Other land disasters like hurricanes and tornadoes can be investigated. Students can read current events on natural disasters and link up with schools in that area to get real facts about the occurrences.

Suggestions for Replication:

Students from one class can do environmental units for other classes and present information gained in this study.

Title: Tree identification Project

Author: Sandra McCann

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Areas: Biology, Environmental Science

Grade Levels: 10 - 12

Time required: Varies

NC Standard Course of Study Goals:

Goal 3: The learner will develop the ability to use science manipulative skills.
Goal 8: The learner will have an understanding of ecology.

Background Information/Pre-Lesson Instructions:

Demonstrate the use of CU-SeeMe, the Apple Quick Take, and Hyper Studio.

Materials/Equipment/Technology:

Trees
Computer
Apple QuickTake Camera
CU-SeeMe
E-mail
Reference and Identification Books on Trees

Instructional Strategies/Procedures:

Cooperative learning - Groups of students collect leaves typical of the area and take pictures of each tree along with the leaf collected from it with the Quick Take camera. The leaves are put in some type of order, pressed, and identified. The leaves and identification information are then exchanged with another class in the state. (Ours was done with a school much south of us. Perhaps one west of us would have been better since we are located in the extreme east.) This was done with CU-SeeMe, E-mail, and the mailing of a computer disk.

Student Evaluation:

The evaluation included the leaf identification and the presentation by computer of their leaves to the other participating school.

Follow-Up Activities:

1. Exchange of information obtained and comparison of types of trees growing in different parts of the state.
2. Discussion among participating schools of conditions for growth.

Suggestions for Replication:

Choose an area west which is affected by acid rain and incorporate a discussion of this in the plan.

Title: Wetlands

Author: Sandra McCann

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: Environmental Science

Grade Levels: 10 - 12

Time required: Varies

NC Standard Course of Study Goals:

Goal 3: The learner will develop the ability to use science manipulative skills.

> Objective 3.3: Demonstrate the ability to manipulate scientific materials and equipment.

Background Information/Pre-Lesson Instructions:

The students have studied wetlands ecology through readings in their text, lecture, and a brief field trip to a local wetlands area. Students have been assigned a research paper on wetlands in which the computer (Internet, E-mail, and CU-SeeMe) is to be one source. The paper is to include information on wetlands in NC and how legislation has affected wetlands in the last ten years.

Materials/Equipment/Technology:

Computer — Internet
http://search.yahoo.com/bin/search?p=wetlands
http://www.epa.gov/ow/

Instructional Strategies/Procedures:

Cooperative learning - rotation of groups at 2 computers hooked up to the Internet. Other students are working in groups with lots of books, pamphlets, and other reading materials.

Student Evaluation:

The student product will be the research paper. (I have also asked for a copy of written information obtained from the Internet with the location listed.)

Follow-Up Activities:

Exchange of wetlands information with other areas in our state and elsewhere in the United States.

Suggestions for Replication:

Choose a location or school in wetlands area to communicate with.

Title: Estuaries

Author: Sandra McCann

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: Environmental Science

Grade Levels: 10 - 12

Time required: Varies (used bits of time during a semester)

NC Standard Course of Study Goals:

2.6.1 Make inferences involving the use of logic to form conclusions from observation.
2.2.1 Classify by sorting and ordering objects according to their properties using similarities and differences.
3.3 Demonstrate the ability to manipulate scientific materials and equipment.

Background Information/Pre-Lesson Instructions:

Discussion of contributions to estuarine environment by inland communities and the ultimate recipients being the extreme east. (Discussion of point and nonpoint pollution sources.)

Materials/Equipment/Technology:

Computer
Water Test Kits
Apple QuickTake camera
CU-SeeMe capabilities
E-mail capabilities
Internet access:

http://www.epa.gov

http://www.nwi.fws.gov/images/status.gif

http://query.webcrawler.com/cgi-bin/WebQuery?searchText=albemarle-pamlico

Instructional Strategies/Procedures:

Cooperative learning - Students from participating schools bordering a particular river feeding into the Albemarle/Pamlico Estuarine System (Tar, Pamlico, etc.) sample the water for dissolved oxygen, nitrates, ph, and temperatures (other indicators can be added). They note activities adjacent to the water such as farming, industry, etc. This information is then exchanged among participating schools.

Student Evaluation:

The exchange of information and some analysis by students via E-mail and CU-SeeMe.

Follow-Up Activities:

One extension used by my classes was the use of newspaper articles concerning local environmental issues and a search of **http://www.epa.gov** for any regulations and/or infractions in our area. It yields much interesting information.

Suggestions for Replication:

Title: Meet Mr. Wizard

Author: Lawson Greenwood

School: John T. Hoggard High School

Address: 4305 Shipyard Blvd.
Wilmington, NC 28403

Phone Number: (910) 350-2072

Subject Area: Chemistry

Grade Levels: 10-12

Time Required: 1 hr./week for the year

NC Standard Course of Study Goals:

6.1, 6.2, 6.3, 7.1, 7.2, 7.3, 7.4, 7.5, 8.1, 8.2, 9.1

Background Information/Pre-Lesson Instructions:

Students will study a lesson in chemistry, learn the concept, perform experiments clarifying the concepts: i.e., chemical reactions vs. physical reactions or acid-base chemistry.

Materials/Equipment/Technology:

Access to WWW, E-mail account

Instructional Strategies/Procedures:

During the first week of school, students will be shown how to E-mail, subscribe to Kidsphere and request an elementary class of science students with whom to mentor. On Fridays of each week, following concept development of a chemistry theme, students will act out "Ask Mr. Wizard" to their elementary pen pals. Students from Advanced Chemistry will work in groups of two to explain chemistry concepts, suggest simple lab activities, and then answer all questions asked by students. If possible use CU-SeeMe.

Student Evaluation:

Elementary school students will be given a list of questions that have been generated by the high school students to determine if they have learned basic chemistry principles.

Follow-Up Activities:

Students will follow their pen pals during the next year of science and teach them physics principles.

Suggestions for Replication:

AP Level students will answer science questions for high school first level chemistry students. AP Students will be given challenge problems by other AP level chemistry students. This can be done countywide, districtwide, or across the US.

Title: Telecommunications Travel Down the Information Highway

Author: Frankie Jenkins

Address: McMichael High School

Address: 6845 Highway 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: Computer Applications I

Grade Levels: 10-12

Time Required: Six Weeks

NC Standard Course of Study Goals:

009: Use telecommunications software
009.05 Use telecommunications software to transmit and receive data

Background Information/Pre-Lesson Instruction:

Use overhead projector and handouts to introduce activities.

Materials/Equipment/Technology:

Overhead projector, LCD panel, computer, printer, handouts

Instructional Strategies/Procedures:

1. Demonstrate use of Pegasus/Netscape.
2. Teach students to send/receive E-mail.
3. Demonstrate how to log in on Netscape, use search engines and bookmark.
4. Teach terminology.

Student Evaluation:

1. Complete student assignment sheets.
2. E-mail a message to teacher.
3. Demonstrate ability to use Internet search engines to locate information.
4. Complete drug/alcohol activity sheet.

Follow-Up Activities:

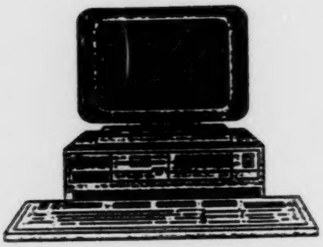
Review and discuss problems with assignments. Let students share with class what they have learned.

Suggestions for Replication:

Give each student a different assignment.
Internet addresses frequently change which often makes it difficult to locate information.

TELECOMMUNICATIONS

Travel Down the Information Highway



Dalton L. McMichael High School

Mrs. Frankie Jenkins

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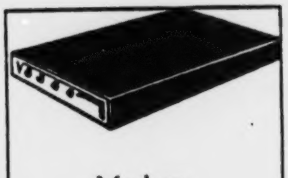
What is Telecommunications and How is It Used?

Telecommunications–the wave of the future

The concept of telecommunications may be defined as the process of transmitting a variety of kinds of information by electronic transmission from one location to another. Telecommunications requires the use of computer software that is designed primarily to transfer data from one computer to another.



Modem
(Internal or External)

Data, message, and voice are applications of telecommunications. When using telecommunications a modem is used to connect a computer to a phone line to transmit data. Therefore, the modem is not an application of telecommunications. A modem, which is a hardware device, refers to an electrical device that converts computer signals for transmission over telephone lines. The data is then retrieved on a telecommunications network and converts phone signals to computer signals by converting digital signals to analog signals and analog signals to digital signals.

Elements of telecommunications include channel, receiver, and source. For example, let's look at a basic communication situation. When you verbalize your thoughts to a friend, you are the information source. Your friend listens, thinks about what you have said, and verbally replies. The air through which the sound of your voices moves is called the communications channel, and your friend is the information receiver.

There are many advantages of telecommunication such as cost, ease of use, and timeliness. With more computers in the home with telecomputing capabilities, more people will be working out of home offices. Advantages for a person to work at home and communicate via telecommunications are flexible hours, less distractions, and reduced travel time.

"Cost, ease of use, and timeliness."

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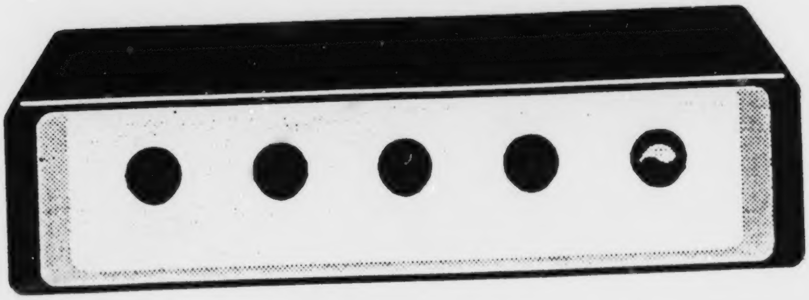
Modem



The modem is an internal or external device that connects the computer and a phone line. It converts computer (digital) signals to phone (audio) signals and vice versa so that information can be sent and received over the phone lines.

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Telecommunication Basics

Digital Transmission

Digital transmission involves converting information into a series of on/of pulses based on a set of codes. The most popular means of exchange is the ASCII (American Standard Code for Information Interchange)

Transmission Mode

There are three types of transmission modes: Simplex (one way), half-duplex (two-way communication but only one way at a time), and duplex or full-duplex (two-way transmission simultaneously).

Transmission Speed

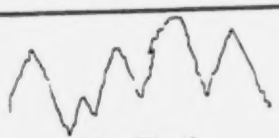
Baud rate indicates the speed at which data is transmitted. The baud rate is constantly changing as new and better equipment and telephone lines are installed. Currently, 9600 BPS is the standard but 14400 BPSmodems are already in existence and this will increase as new technology is developed.

Protocol

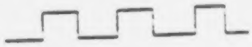
A communication link must abide by a set of rules, agreed upon by each user, to govern the transfer of information from one communication device to another.

Analog versus digital signals

Analog signals are continuous electromagnetic waves, whereas, digital signals are discontinuous pulses that represent ones and zeros. The computer produces analog signal which must be converted by the modem. Signals carried over the telephone lines must be digital. A the other end of the connection, a modem must convert the digital signals back to analog signals that the computer can understand.



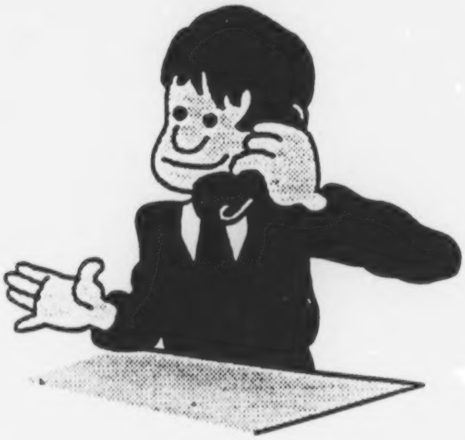
Analog Signal

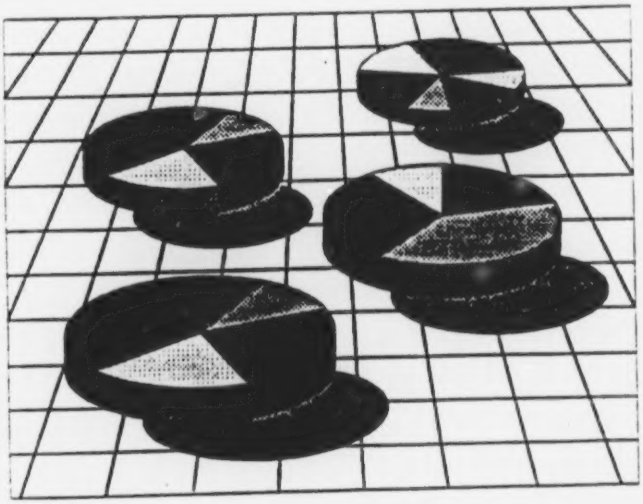


Digital Signal

Types of Telecommunications

Voice
(sound)





Data
(text, graphics,
and images)

Video
(motion and sound)

Bulletin Boards

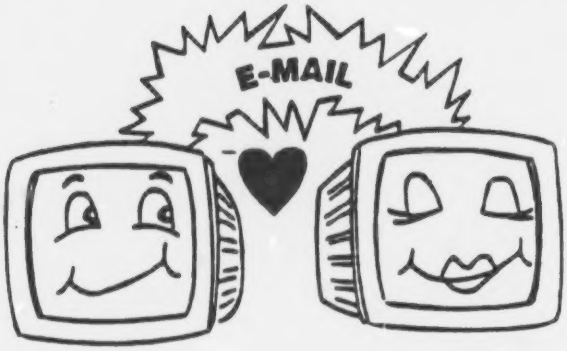
A service that can be subscribed to in order to obtain information and exchange data with other users. Users may post electronic messages for other users through a bulletin board service (BBS).

Information that can be obtained from bulletin boards includes news information, stock market information, and weather. This information can be exchanged while on-line.

The use of bulletin board systems is quite varied:

- Companies utilize bulletin board systems for customer support
- A manufacturer operates a bulletin board system to upload sales and profit figures from its retail stores
- Business executives communicate, share ideas, and problem solve through a BBS
- A local computer whiz operates a BBS for local information, games, and e-mail

Electronic Mail



Private messages that are sent electronically are called E-mail. Electronic mail (E-mail) can be printed, read and written.

Advantages of E-mail:

- Quick
- Inexpensive
- Interactive communication

Changing the workplace:

- Making upper management more accessible
- Speeding pace of business and research

◊ Humor, anger, and other emotions may get lost or misinterpreted by the reader(s) of your message. Compensate by using appropriate wording or emoticons.

◊ Use care in the selection of typefaces. All capital letters can look like "yelling" on a computer screen.

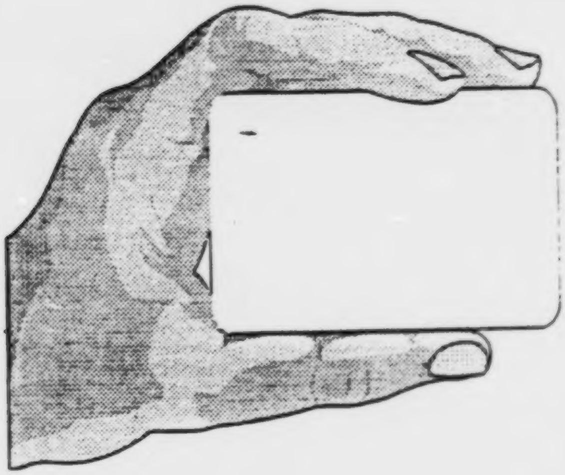
◊ Remember you are addressing a person not a machine. Picture your intended audience, this will help you avoid sounding harsher than you intended.

◊ Complete the SUBJECT line so that readers can determine if they want to read your message. Sign you messages.

Rules of Etiquette for E-Mail[1]

- ◊ If you wouldn't say something in a business meeting, don't say it in an electronic message.
- ◊ Normal workplace rules of conduct apply: Don't libel or slander others, even public figures; don't make comments of a sexual, racial, or ethnic nature; don't use company time to socialize with other employees or plan nonwork activities.
- ◊ Because the computers are furnished by the firm for company use, the firm has the right to review and control this use.
- ◊ Political petitions, ethnic jokes, chain letters, activities for financial gain, and inappropriate disclosure of company information are prohibited in E-mail just as they are in other office activities.
- ◊ Assume your material may not be confidential. It could be sent to more people than you intend or remain in archives for a very long time.

Electronic Banking



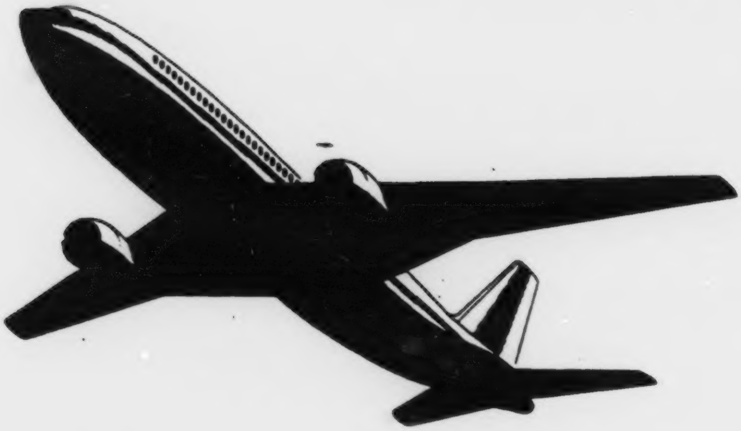
ATM Machines

- Financial transactions without a teller
- Automatic teller machines (ATM), commonplace
- Access from different banks that are part of the network

Personal Computers

- Computer, modem, and telephone
- Account balances
- Transfers

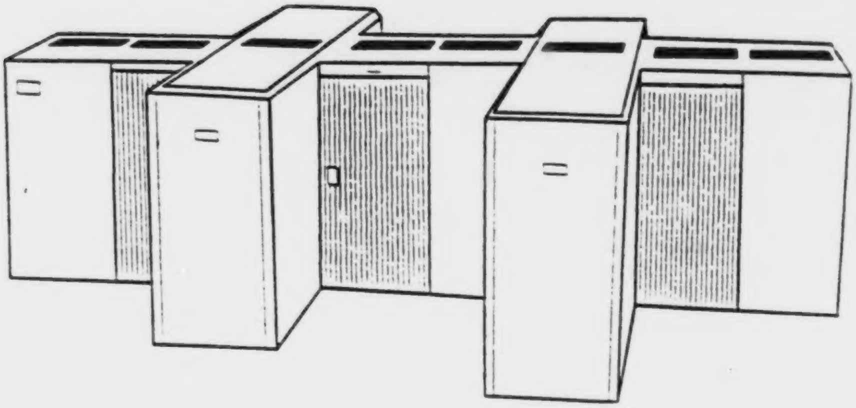
Airline Industry



Telecommunication is essential to the modern-day airlines industry:

- Flight plans
- Inventory
- Scheduling
- Reservations
- Fuel supplies
- Maintenance

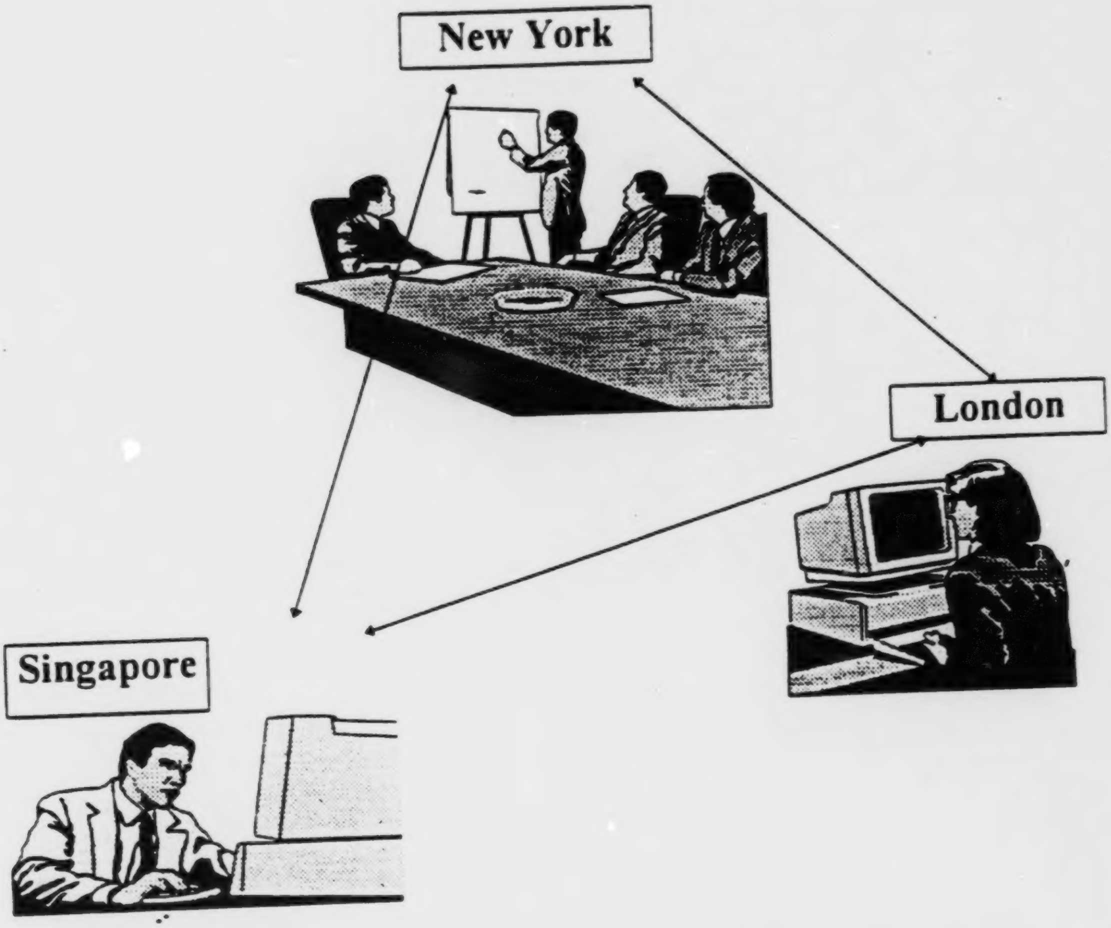
Database Services



Computer systems that stores large amounts of information on a variety of topics of interest to the professional and individual:

- Computer, telephone, and modem
- Obtain specific types of information
- Charge fee for on-line time

Teleconferencing



New York

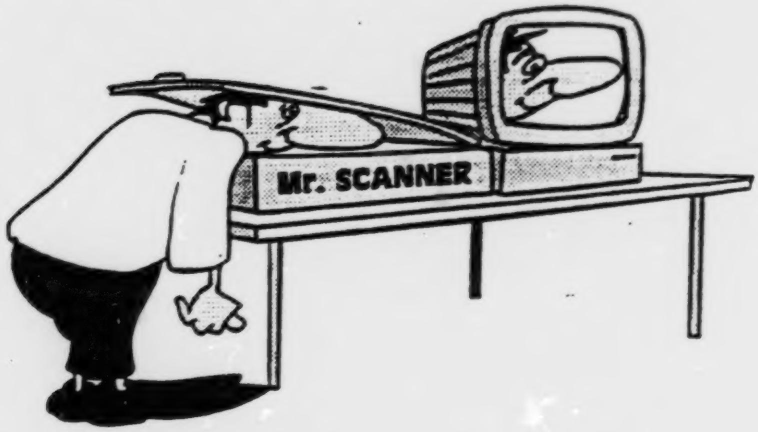
London

Singapore

Teleconferencing permits a computer conference through a central computer to allow interaction among multiple users.

- **Allows comments from all participants**
- **Locations may be miles and miles apart**
- **Inputs from computer keyboard and transmits information**
- **Participants read message on their screen or project on an overhead screen**

Sales Entries



Scanner--A device that scans a bar code:

Used in retail and supermarket chains, the scanner scans a bar code, which consists of lines and numbers. The scanner, connected to a store computer, contains a database and sends price and product identification to the terminal to be printed on the cash register tape. The computer subtracts the product from inventory. This type of system reduces checkout time and the customer experiences fewer mistakes and receives a receipt with the product description and price for each item.

Voice Mail

Voice mail:

- Requires touch-tone telephone
- Caller can records message, replay, change, and send
- Received and stored in receiver's voice mailbox
- Message may be sent to one or more individuals or sent to a predefined group

Facsimile

FAX 3205
FAX 3205

FAX Machine:

A device used to transmit pictures and graphics that involves scanning the image at the originating unit and recreating the image on the receiving unit.

On-Line Services

On-line services offer access to a wide variety of communications and information tools. Larger providers carry news feeds from major services; libraries of newspapers, magazines, and journals; and encyclopedias and research work. In addition, software is available for downloading to your PC. Forums for users with special interest such as travel, art, and music abound.

The five major on-line services are American On-line, CompuServe, Dow Jones News/Retrieval, Genie, and Prodigy. Although Prodigy claims the largest number of users, CompuServe offers the most of everything across the board. Users of America On-line continually applaud its graphical interface. Genie has an excellent range of third-party databases and libraries. Dow Jones News/Retrieval provides unequaled access to business-related news and information, and its gateway to MCI mail gives it top-notch e-mail as well.

Other on-line services cater to specific users.

The Internet is not a service, but an electronic network of computers that includes nearly every university, government, and research facility in the world, plus many commercial sites. The 7 to 15 million people with a connection have access to the libraries of all of its sources--from databases of the Department of Agriculture to census material to sports schedules and everything in between.

On-line Etiquette

1. Compose E-mail, bulletins off line.
2. Make your 'subject" as descriptive as possible.
3. Always include a salutation: "Dear John . . ."
4. Always sign your name and tell where you are from. If possible, include your E-mail address and, if appropriate, alternative addresses.
5. Always restate or describe the question that you are answering or the issue on which you are commenting.
6. Always acknowledge that you have received a file someone has sent you.
7. Check your E-mail once or twice a week if you are expecting replies.
8. Delete your E-mail once you have read it.
9. Do not send personal messages on conference, bulletin boards, or digests.
10. Do not expect an answer in less than 2-3 days.
11. When sending a file, give as much information as possible: length, type, contents.
12. Private E-mail is informal, so tolerate editing and typing errors.
13. Conference and bulletin board messages are "showcase." Proofread and edit messages.
14. Do not be vulgar or offensive. Electronic text is devoid of any context clues to convey shades of irony, sarcasm, or harmless humor.
15. Do not publicly criticize (or "flame") others.
16. Protect others' privacy.
17. Observe copyright restrictions.
18. Do not upload/download software illegally.
19. Do not access services illegally.

Emoticons

:-)	Happy, smiley
;-)	Winking, smiley
:-(	Sad, frowning
%-)	Confused
>:<	Angry
>:>	Devilish
:-D	Laughing
:-@	Screaming
:-/	Skeptical
:-P	Nyahh!
:-)	Grin or smile
:(	Frown
:*	Kiss

TELECOMMUNICATIONS GLOSSARY

ASCII files (American Code for Information Interchange) Text files that can be read by any network or word processor.

ATM (Asynchronous Transfer Mode) Automatic teller machines.

Baud rate The bits per second speed at which telecommunications data is transmitted, such as 2400, 9600, or 14.4 baud rates.

Bulletin board A computer service where users may post electronic bulletins for others.

Communications software Programs that allow one computer to communicate with another through a modem.

Database Collection of data (such as, telephone book or card catalog in a library); or collection of files stored in a large, or host computer.

Demodulator A device that converts signals transmitted over a communication link into electrical pulses, or bits, readable by a computer.

Download Transferring data (files) from a large computer to a smaller one.

Electronic address Name or number given to an Internet or network account, usually consisting of **userID@system.institution.type**

Electronic mail (E-mail) Private messages sent or received electronically to a person's computer "mail box."

Emoticons A name given to symbols used with E-mail to express emotions and feeling i.e., smile :-), frown :-(.

Facsimile (FAX) The process of transmitting text, pictures, diagrams, etc., via a telecommunications system to a remote location where a hard copy is reproduced.

Full duplex A setting that permits data transmission in both directions, to the user and from the user, similar to a telephone.

Gateway Hardware and software used to link computer networks with different protocols so they can communicate and share data.

Telecommunications Glossary Continued

Telecommunications Communications at a distance, the communications link between user's terminal and host computer.

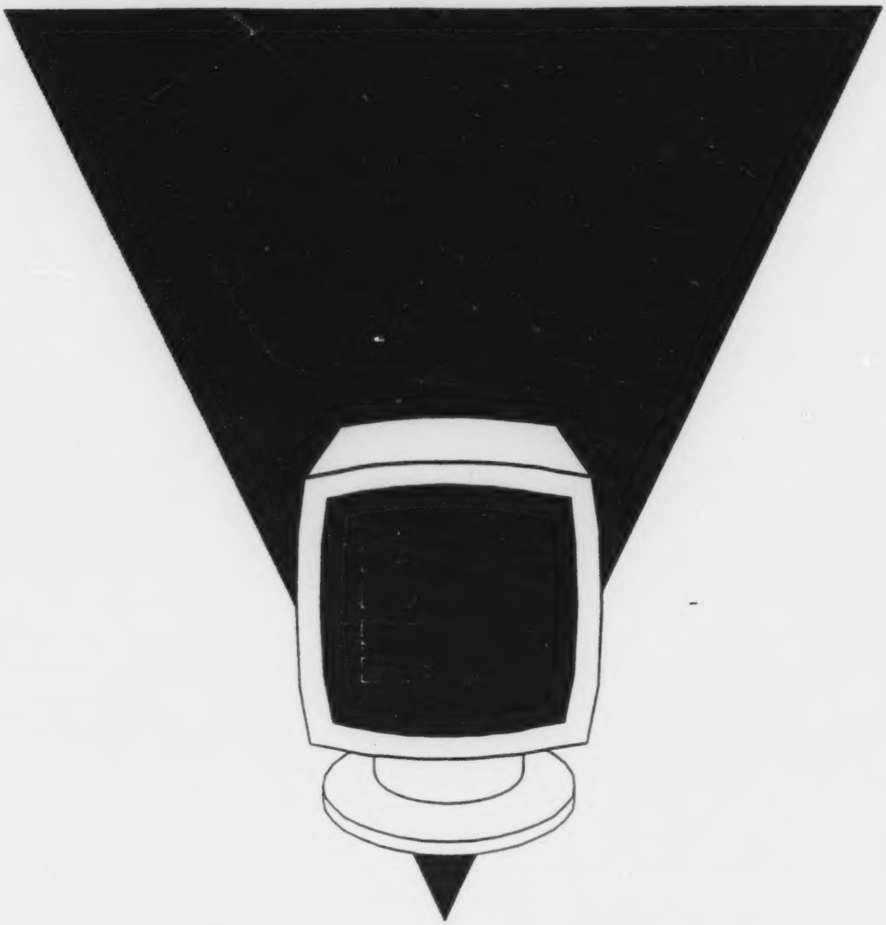
Teleconference A conference among people remote from one another who are linked by telecommunications devices.

Telephone line The conduit for telecommunicated messages and information.

Telephony Electronic voice communications.

Upload Sending data to the host computer.

Voice mail Telephone answering device that permits a caller to send a one-way voice messages that is stored for retrieval by recipient.



INTERNET

Adventures on the SUPERHIGHWAY

Computer Applications I
Mrs. Jenkins

INTERNET

What is the Internet?

It is the world's fastest growing computer network with millions of computer users throughout the world. The Internet really isn't new. It was developed in 1969 when the U.S. Department of Defense needed a way to share information and ideas among different research sites. The Defense Department developed ARPANET (Department of Defense's Advanced Research Projects Agency Network) in order to communicate during a nuclear war. Although ARPANET no longer exists, it paved the way to today's superhighway - the **INTERNET**.

The Internet allows users to communicate with other users to search for information on various subjects, and to send E-Mail. It is often called the "Net" because it is the world's largest computer network.

What is a Network?

A network can be two or more computers linked together to share information. In the case of the Internet, the network links millions of computers.

What is Cyberspace?

When you are on the electronic superhighway, you are considered to be in Cyberspace. When you chat with someone, you are conducting a Cyberchat.

Surf the Net

"Surf the Net" means to explore the Net. Just how does one surf the Net? It is easy. The Host, which is a computer attached to the NET and provides services to Internet Users, must recognize you and let you log in. In order to log in, you must have an Internet address.

An Internet Address:

Example: president@whitehouse.gov (president at WhiteHouse dot government)

@ sign is pronounced "AT"
A period (.) is a "DOT"
There are no spaces in an Internet name
Most letters are lower case

The Internet is divided into sections called "domains"

Examples:
mil = military
edu = educational
com = commercial
org = organizational
gov = government
net = network

The site - president@whitehouse.gov - would be a governmental site

here are also country codes:

.au = Australia
.ch = Switzerland
.us = United States

Before a host can recognize you, you must have an Internet address. The address is a number like 158.91.6.2. Since numbers are hard to remember, the DNS (Domain Name System) substituted names that are easier to remember. Names are assigned by computer technicians that manage local networks. Every name on the NET is different.

Remember that the Internet hosts and servers speak a language called **TCP/IP**, short for Transmission Control Protocol/Internet Protocol.

IP, Internet Protocol, is like an address label on a package you send through the mail. The address makes sure the package arrives at the right place. **TCP**, Transmission Control Protocol, keeps track of every item in the package. If an item does not arrive at the correct destination, TCP asks the host to send the package again.

Tools of the Internet

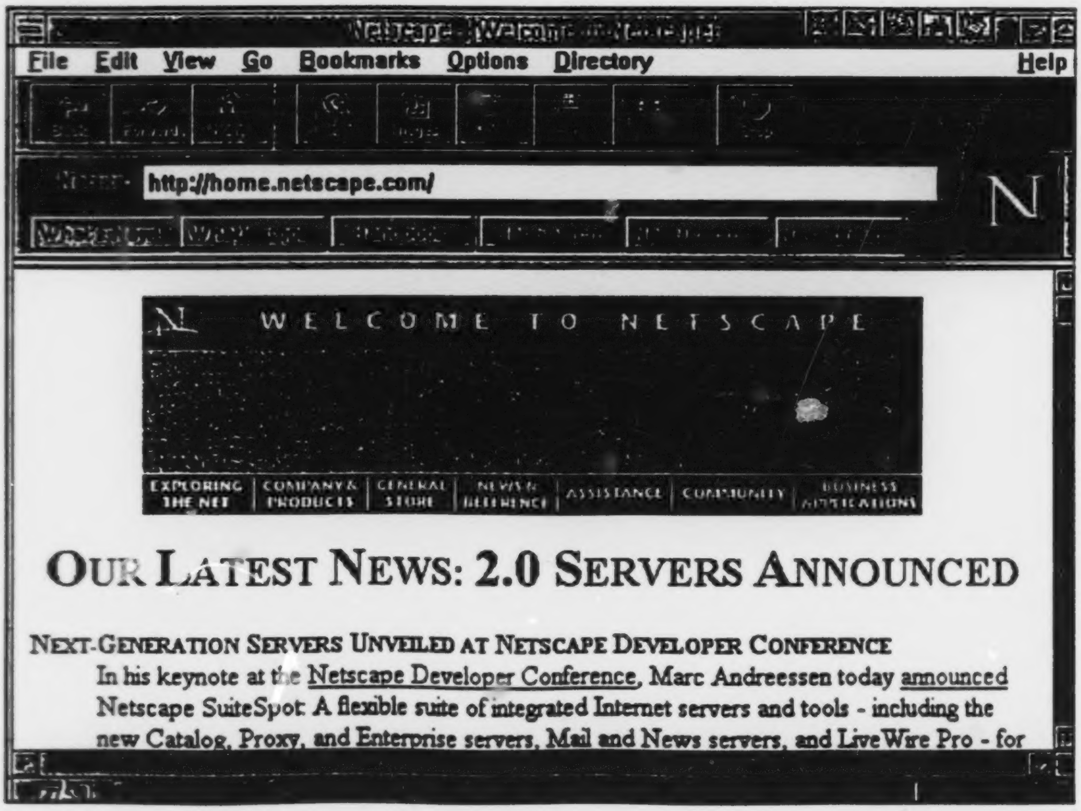
In order to find and use Internet resources, you need several Internet tools. Below are some of the tools. (See definitions in back of book)

Browsers - WWW (World Wide Web) / Yahoo
Gopher
FTP
Telnet
USENET Newsgroup
E-Mail

HOW DO I NAVIGATE?

NETSCAPE

First, place your mouse pointer on the **NETSCAPE** icon and double click. The first screen that you see is the Netscape home page. Let's look at this page before you begin your travels on the superhighway.


File
Edit
View
Go
Bookmarks
Options
Directory
Help
http://home.netscape.com/
N
WELCOME TO NETSCAPE
EXPLORING THE NET
COMPANY & PRODUCTS
GENERAL STORE
NEWS & REFERENCE
ASSISTANCE
COMMUNITY
BUSINESS APPLICATIONS

OUR LATEST NEWS: 2.0 SERVERS ANNOUNCED

NEXT-GENERATION SERVERS UNVEILED AT NETSCAPE DEVELOPER CONFERENCE

In his keynote at the Netscape Developer Conference, Marc Andreessen today announced Netscape SuiteSpot: A flexible suite of integrated Internet servers and tools - including the new Catalog, Proxy, and Enterprise servers, Mail and News servers, and LiveWire Pro - for

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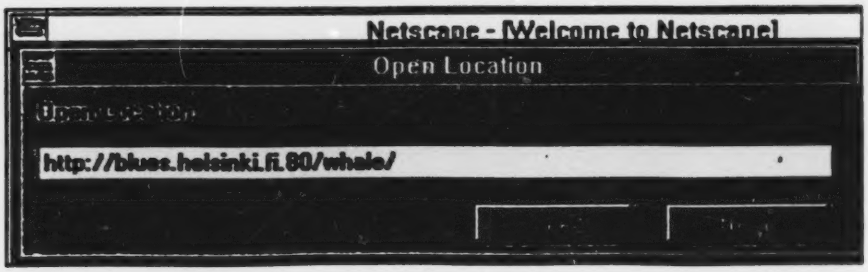
Notice **NETSITE** at the top portion of the screen. Within the rectangle area is the Internet address for this home page site. The address begins with http. This is short for **HyperText Transfer Protocol**. Protocols are instructions computers understand that tell them how to handle and send hypertext documents from computer to computer. Hypertext is a system connecting keywords in one document to text in other documents in other locations.

Also, notice that there are no spaces within the address. Every letter, symbol, and punctuation mark must be typed correctly in order for the address to work. The **URL** (address or reference code) is case sensitive. Upper and lower case letters must be keyed as shown in the address. For example, www and WWW are different from each other. Also, every (.) and (/) must be keyed properly; for example, a (\) is not a (/).

At the top of the Netscape Home Page one can see the following buttons: **Back, Home, Open, etc..** The **Home** key will return you to the Netscape Home Page. As you browse through the Internet , pressing **Back** will move you backward through the pages you have already viewed. Pressing **Forward** will move you ahead to each new page. Since Netscape keeps up with where you have visited, you can always click the **Go** option to display where you've been and then click on the location in the list to return.

I already have an address

If you already know your Internet address, then click **OPEN**. A small screen will drop down with a rectangle bar. This is where you will type the address. (Remember to type the address as it appears. It is case sensitive) After the address is typed , click **OPEN** again. You will notice that the large **N** in the upper right corner of the screen appears to have comets moving around it. This means that the computer is searching for the address. Also, across the bottom of the screen you can see the number of bytes that are loading. When the site is found, the comets stop moving and the information at the bottom of the screen will tell you that the document is complete.



http://blues.helsinki.fi.80/whale/

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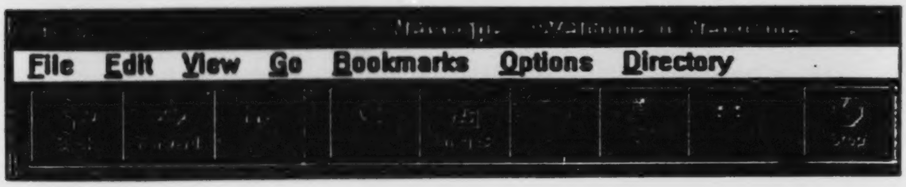
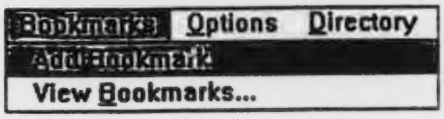
I want to keep what I have found

At the top of the Netscape screen you will see "**Bookmarks**". Click on **Bookmarks**.


File
Edit
View
Go
Bookmarks
Options
Directory

Click on **Add Bookmark**


Bookmarks
Options
Directory
Add Bookmark
View Bookmarks...

Once you have added sites to your bookmark, you can then click on bookmark, highlight the site you want to load and click again. You may have to scroll down and click **View Bookmarks** to see all selected sites.

REMEMBER, if you notice the comets circling the letter N for a long period of time, or in other words, the information from the site you are trying to access is taking a very long time to load, you may click the STOP button. You may have to return HOME or go BACK to another page. You can try again later.

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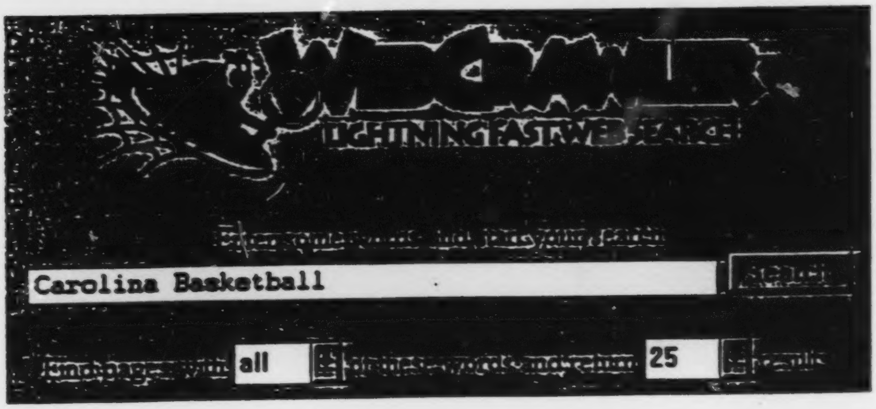
I do not know the Internet address

Now it is time to use the Search Engines such as **WWW - World Wide Web.** **Web-Crawler** is a search feature that lists pages pertaining to a specific topic and uses relevance feedback. **Webcrawler** lists in the order of confidence The higher the number the more information you will find.

Then there is **Yahoo** which is an index of Web pages, organized by topics. Just click through the list to find your information. For example: If you are looking for food recipes from India, you would type **India, Food recipes**, then click the search button.

Excite is similar to webcrawler except that is allows searching of newsgroups, web reviews and advertisements.

When you are searching you will often see results indicating the number of documents found and the number returned. If your search turns up more than 25 results, you can search the first 25, then you can click on the next 25.



Carolina Basketball

all

25

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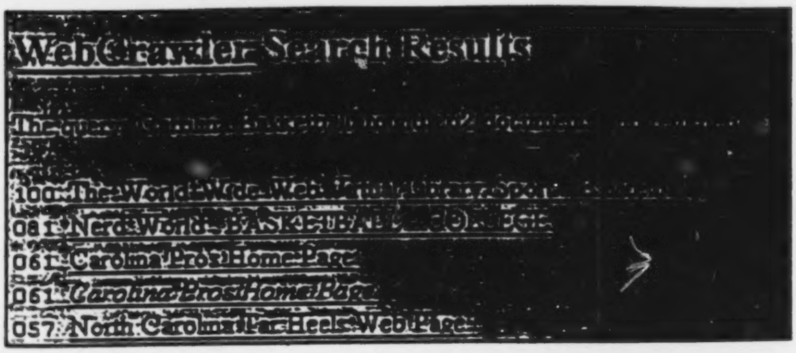
The numbers on the left side list the results in order of ***confidence***. A high number indicates that this particular term would most likely be found more often than other sites with lower numbers.



WebCrawler Search Results

The query [illegible]

100 The World Wide Web [illegible]

081 Nerd World - BASKETBALL [illegible]

061 Carolina Pros Home Page

061 *Carolina Pros Home Page*

057 North Carolina Tar Heels Web Page

As you browse the superhighway, you will find that it becomes easier to move around. Whether you already know your Internet address or you need to use a search engine, information can be obtained if you follow many of the instructions that have been provided for you.

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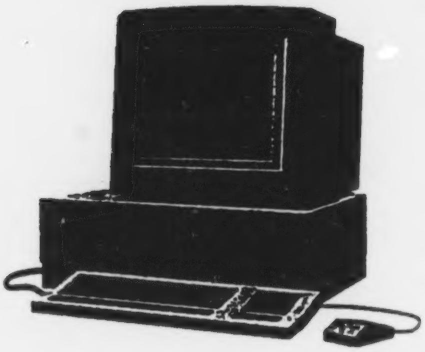
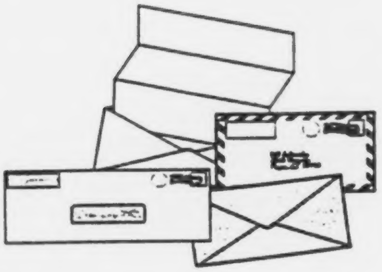
ELECTRONIC MAIL

How Does It Work?



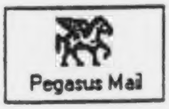


ELECTRONIC MAIL

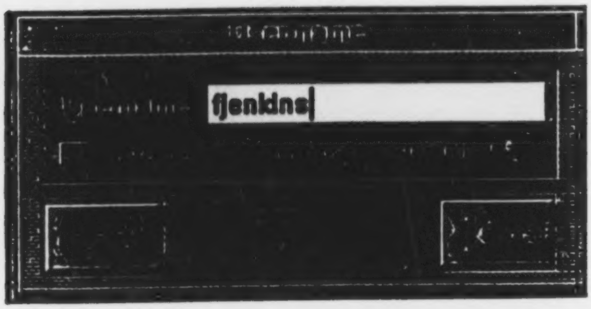
E-Mail (electronic mail)

Allows you to receive and send memos, notes, and letters to anyone in the world with an Internet address.

Pegasus Mail (electronic mailprogram)

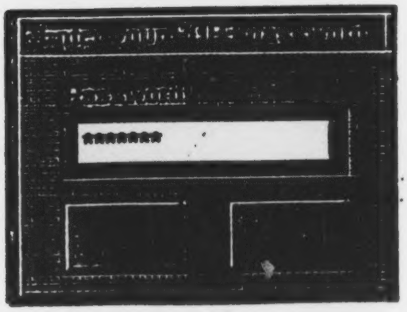


1. Double click the Pegasus icon (as shown above)


fjenkins

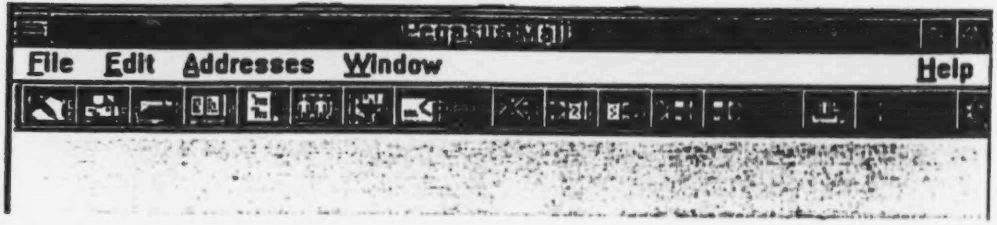
2. Type your name at Username (example: fjenkins)

3. Click OK


****

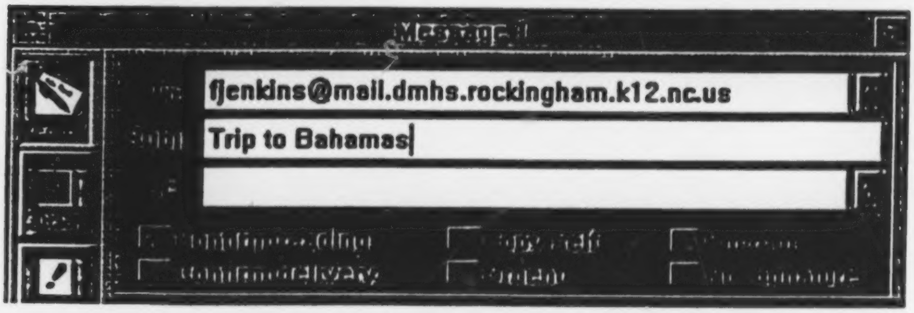
4. Type your password and click OK (Your password will not appear, instead an asterisk will be substituted for each character)

The next screen will display many icons at the top. Notice the first four icons starting from left to right. The **pen and paper icon** allows you to write new e-mail. The **letter icon** is used to check your new mail. The **folder icon** is where your saved mail is kept. The **book icon** allows you to manage your address book so that you do not have to retype e-mail addresses that you use often.



Let's send an E-mail message

1. Click the pen and paper icon



fjenkins@mail.dmhs.rockingham.k12.nc.us

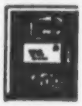
Trip to Bahamas

2. In the box beside of the word To, type the e-mail address of the person to whom you are sending the message to. Remember, the address is case sensitive.

3. Press the TAB key to move the cursor to the subject line. As proper etiquette, you need to type in a subject. (what does your message concern)

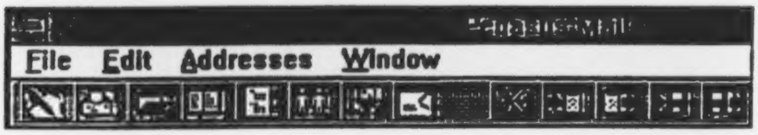
4. After you type in your message, tab twice to the message area. Type in the message that you wish to send. The lines will wraparound. Be sure to type your name at the end of the message.

5. When your message is complete, click the send button on the message screen.

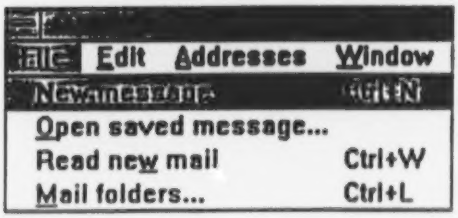


I want to check my E-mail messages

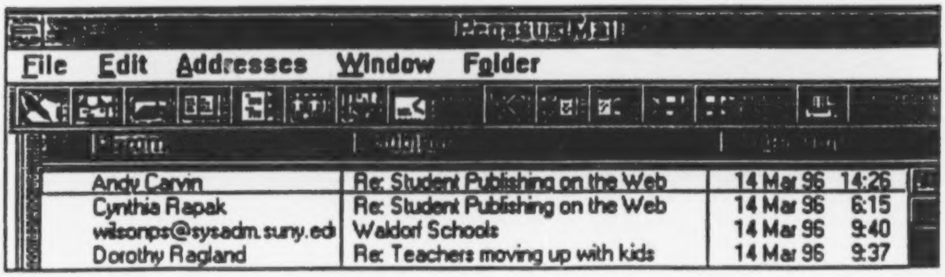
Using the top of the graph below as a reference, place your arrow on the word **file** in the left corner and click once.


Pegasus Mail
File
Edit
Addresses
Window

A drop down menu will appear. Next click on **Read new mail.**


File
Edit
Addresses
Window
New message Ctrl+N
Open saved message...
Read new mail Ctrl+W
Mail folders... Ctrl+L

If you have any new mail, it will appear on the screen as illustrated below. Highlight the mail that you want to read by placing the arrow on the desired line and click once. Next, double click. Or you can place the arrow on the desired line and just double click. Either way, that particular item of mail will display on your screen..


Pegasus Mail
File
Edit
Addresses
Window
Folder

From	Subject	
Andy Carvin	Re: Student Publishing on the Web	14 Mar 96 14:26
Cynthia Rapak	Re: Student Publishing on the Web	14 Mar 96 6:15
wilsonps@sysadm.suny.edi	Waldorf Schools	14 Mar 96 9:40
Dorothy Ragland	Re: Teachers moving up with kids	14 Mar 96 9:37

If you do not want to keep your mail or you have too much mail, you may delete one or more lines by following these steps:

Delete one line:

1. Highlight the line that you want to delete
2. Press the delete key
3. Then press **Y** for **Yes**

Delete more than one line:

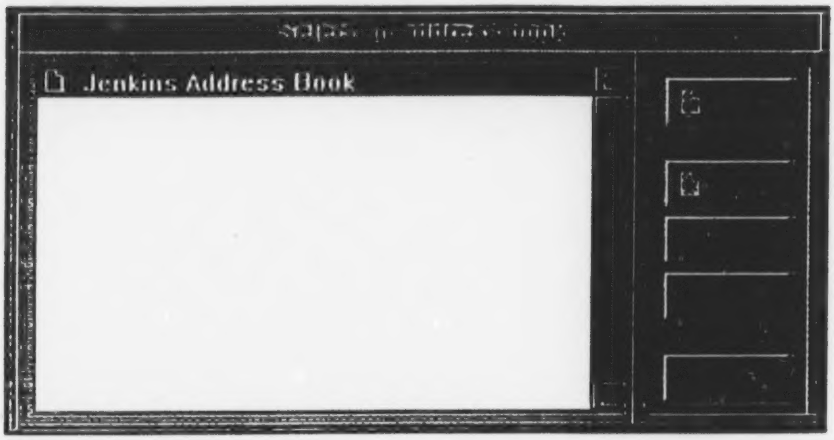
1. Place arrow on the first line that you want to delete
2. Hold down the **CTRL KEY** (do not release it) and single click each line that you want to delete.
3. Once all lines are highlighted, press the **delete key**, then press **Yes**

Printing an E-mail message

Highlight the message that you want to print.
Click file
Click print

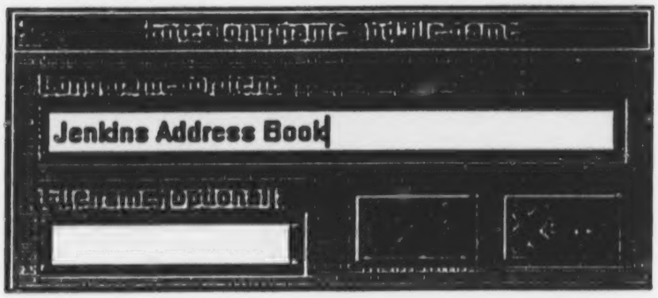
Where do I keep everybody's E-mail address?

1. Press the book icon at the top of the screen.
2. The following screen will be displayed (Your screen will not have a name)



Jenkins Address Book

3. Click on **New** to name the address book.



Jenkins Address Book

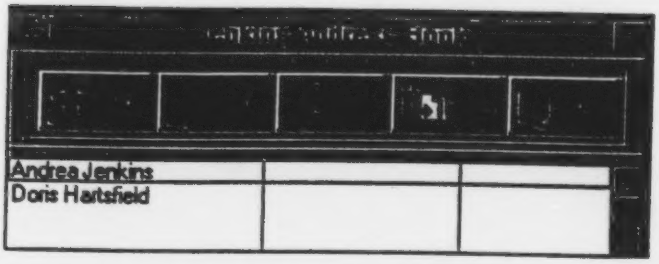
4. Type in the name you wish to call your address book. Example: Jenkins Address Book.
5. Click **OK**

Let's add an address to the address book

6. Click the book icon again. The name of your address book should be highlighted.

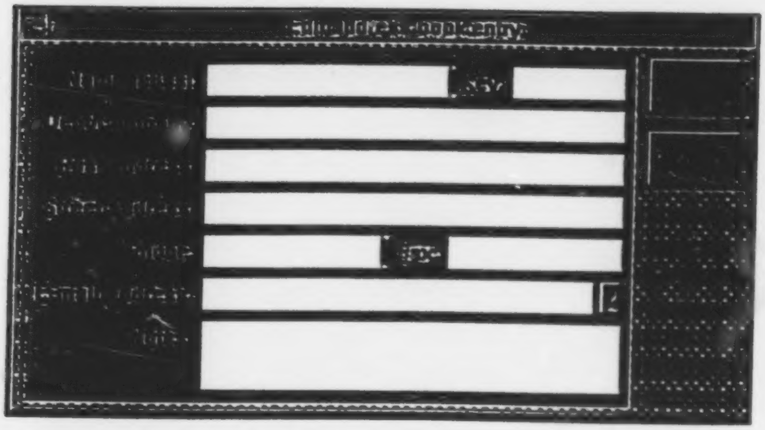
BEST COPY AVAILABLE

7. Click the **Open** button. A screen similar to the one below will appear. At this time you will not have any addresses.



Andrea Jenkins
Doris Hartsfield

8. Click on **Add** to add new addresses. The screen below should appear.



9. Beside of **Name** (alias), type the name of the person to whom the address belongs. Then press the tab key or click the cursor beside of **E-mail address**.

10. Type in the person's e-mail address (Remember that addresses are case sensitive)

11. Click **OK**. Your new address has now been added.

12. Click on **Close** to exit the address book

INTERNET ASSIGNMENT

Computer Applications I

JENKINS

1. Locate an Internet address. Write the address on the line provided. You can find addresses in the newspapers, magazines, and on television.

   Internet Address: ______________________________

   Locate the address on the Internet and write a brief description of the Internet site.

   ____

   ____

   ____

   ____

   ____

2. Select **OPEN** from the toolbar at the top of the Netscape screen. Type in the internet address given. Click **OK**. Answer the questions below for #1 - 10:

   Address: gopher://marvel.loc.gov/

   a) Phone # of Senator Jesse Helms ______________________________
   b) Fax # of Senator Jesse Helms ______________________________
   c) E-mail address of Jesse Helms ______________________________

3. Address: http://www.infi.net/nr/triad.html

   Which section has the better concert seats at the Walnut Creek Amphitheater, section 102 or 104?

   ____

4. Address: http://www.yahoo.com

   List three symptoms which occur from a bite of a black widow, a venomous spider.

   a) ______________________________

b) ______________________________
c) ______________________________

5. Address: http//www.infi.net/nr/triad.html

What was the original name for Guilford College?

____

6. Address: http://www.yahoo.com

Who is at greatest risk for an aneurysm?

____
____

7. Address: http://www.si.edu/welcome/faq/pyramid.htm

The largest pyramid is the Great Pyramid of Giza. How many acres does the base of the pyramid cover?

____

8. Address: http://www.odci.gov/cia

Who has to give approval for the CIA to spy on an American Citizen?

____

9. Address: http://www.blackhills.com/

Mount Rushmore is a memorial commemorating four Presidents. How high is each President?

____
____

10. Address: http://www.excite.com/research.gw

What is the largest subspieces of tiger?

____

SEARCH ENGINES: (Yahoo / webcrawler / excite) Browse the Intenet

1. What is the population of Costa Rica? ____________________
   Address: ____________________
2. What is now the world's tallest building? ____________________
   ____
   Address: ____________________

3. Which basketball player had the highest 3 point field goal percentage in the Jan 29, 1983 UNC vs Georgia Tech game? ____________________
   Address: ____________________

4. Antifreeze is poisonous to cats. According to Dr. Ken Lawrence of Sherman, TX, there is something that can be administered early to a cat that has ingested antifreeze to enhance its possibility of surviving. What is the substance?
   ____
   Address: ____________________

5. As of December 1995, what drug has been found effective for melanoma?
   ____
   Address: ____________________

6. According to Forbes Top 10, what is Oprah Winfrey worth?
   ____
   Address: ____________________

7. What is the name of the new Kodak digital camera? ____________________
   Address: ____________________

8. Where is the National Center for Atmospheric Research located?
   ____
   Address: ____________________

9. Where will you find the largest net of weather instruments ever developed to trace tornado development? ____________________
   Address: ____________________

10. Where is the home (country) of the World Wide Web?

____

Address: ______________________________________

Using **Pegasus Mail**, send a message to Mrs. Jenkins. (**fjenkins@mail.dmhs.rockingham.k12.nc.us**) I will check my e-mail and print out your message. Write the message that you are sending below:

____

____

____

____

____

____

____

Alcohol and Other Drugs

Attached is a sheet on Alcohol and Drugs. **Circle** one of the names you prefer to research. Using the Internet, search for the information on the **back side** of the sheet Write your name where is asks for name of researcher.

List of Alcohol and Other Drugs

- alcohol
- amphetamines
- antihistamines
- barbiturates
- codeine
- benzedrine
- caffeine
- cocaine
- equanil
- hashish
- heroin
- hydromorphone
- inhalants
- LSD
- librium
- marijuana
- meperidine (pethidine)
- mescaline and peyote
- methadone
- meth-amphetamine
- methaqualone
- morphine
- opiates
- opium
- phencyclidine (PCP)
- phenmetrazine
- preludin
- solvents
- tetrahydrocannabinol
- tobacco
- valium

AOD RESEARCH BRIEF

Name of Researcher(s) ____________________

Name of Drug researched ____________________

Category (check one)
○ narcotic
○ depressant
○ stimulant
○ organic solvent
○ hallucinogen
○ cannabis

Trade or names ____________________

Slang terms ____________________

Medical uses ____________________

Availability ____________________

Chemical information ____________________
____

Duration of Effects ____________________

Methods of Use ____________________
____

Short Term Effects ____________________
____

Long Term Effects ____________________
____

Effects of Overdose ____________________
____

Withdrawal Syndrome ____________________
____

Legal Status ____________________

Additional notes:

J. Gilbert, October 1991

Title: Telecommunications/Integration

Authors: Delores Barnhill, Mary Burroughs, Joyce Cotton, Mike Sisk, Julia Williams (adapted and used by Cindy Toler)

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Telephone Number: (919) 943-6341

Subject Area: Computer Applications II

Grade Levels: 10-12

Time Required: 1 hour

NC Standard Course of Study Goals:

Computer Applications II (BE 6412) Curricuium Guide.
Competency: 007.00 Use advanced telecommunications software features.
Objective: 007.02 Identify other computer applications that can be integrated with telecommunications and demonstrate their usage.

Background Information/Pre-Lesson Instructions:

Students will be familiar with the areas of database and word processing from previous units. Students will be reviewed on telecommunication basics and the types of telecommunication services. The students will also have practiced downloading files. Duplexing and data transmission terms will be discussed. Network terms and types of networks will be discussed.

Materials/Equipment/Technology:

Will use transparency masters on telecommunications, duplexing, star topology, ring topology, and bus topology. The students will also review handouts on types of telecommunication services, transmission of data, networks, and integration of telecommunication and other software. Classroom textbooks and hardware and software manuals may also be used.

Will need to have access to a computer with Internet access. Classroom computers should have software that has the software for database and word processing.

Instructional Strategies/Procedures:

1. Review telecommunication basics using TM 5.
2. Review types of telecommunication services using HO 6.
3. Practice downloading files using HO 7.
4. Discuss duplexing using TM 6.
5. Discuss terms as they relate to the transmission of data using HO 8.
6. Discuss network terms using HO 9.
7. Discuss types of networks using TM 7, 8, and 9.
8. Discuss integration of telecommunication and other software using HO 10.
9. Practice integrating telecommunications and other software using HO 11, Activity 1.

Student Evaluation:

Grading suggestions of Integrated Activity 1:

Non-mastery	0- 64 points
Partial mastery	65- 74 points
Mastery	75- 89 points
Above master	90-100 points
NA	Not Applicable

Follow proper procedure for turning on computer	(0-10 points)	____
Loaded communication software	(0-10 points)	____
Performed computer/telephone linkage	(0-10 points)	____
Checked for connection	(0-10 points)	____
Entered correct log on information	(0-10 points)	____
Accessed correct database	(0-10 points)	____
Downloaded to file/disk	(0-30 points)	____
Logged off properly	(0-10 points)	____

Follow-Up Activities:

HO 11, Activities 2-7

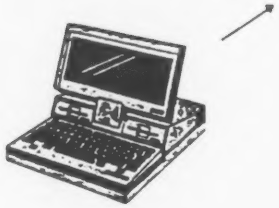
Suggestions for Replication:

This activity can be repeated in classes from year to year.

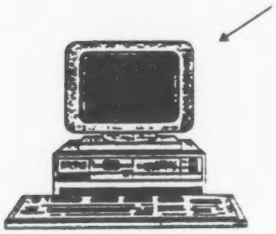
Telecommunications

Telecommunications is defined as the process of transmitting a variety of types of information by electronic transmission from one location to another.

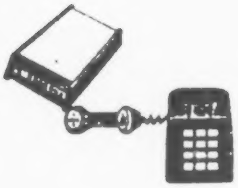
Telecommunications software is necessary for data to be transmitted using a modem.



To send a computer program or document to another computer is called uploading.



Transferring data or a program from one computer to the user's computer is called downloading. Download allows information to be sent over telephone lines directly to a disk.



Basic functions of telecommunications software include phone dialing, sending/receiving data, and storing information.

Types of Telecommunication Services

- Electronic mail by means of telecommunications includes the electronic preparation/sending of messages, documents, and images.
- Voice communications is the transmission of a voice message to an electronic mailbox.
- A collection of information stored in a large, host computer is called a database. The steps to establish connection with a database service are called log-on.
- A bibliographical service is a menu-driven, general-use service. Many libraries use bibliographic services.
- To gain access to a network system by dialing the telephone number and entering an identification number and password is called logging on.
- Voice mail is the electronic storage and retrieval of voices messages. Voice messages are a technological advance of the switch board.
- A machine that transmits an image of a document over telephone lines is a facsimile. An image transmitted by one facsimile machine is received by another facsimile machine in seconds.
- A telecommunications information service is described as a large network that provides access to information of all types.
- The electronic preparation and sending of messages, documents, or images. Electronic mail has the capability of transmitting text but not signatures.

Activities

Complete the following activities using a news/retrieval service. **Download the information to a disk using the file names indicated. Print a copy of each file.** (Note to instructor: The number of types of activities that can be completed will depend upon the type of service available at your school. Substitute other activities depending upon the service available.)

1. Obtain a list of the top news headlines from around the world compiled from a newswire service. Name the file NEWS1.
2. Search a database for the latest scores, stats, standings, and schedules for the sports that are currently in season. Name the file SPORTS1.
3. Using a shopping service database, find out what special bargains are available. Select an item and do comparative pricing. Save the file as SHOP1.
4. Access a travel service and plan a trip to San Diego. Use the nearest airport as the departure site. Name the file TRAVEL1.
5. Complete a two-page report on computers using information from the encyclopedia and news service. Save the file as COMP1.
6. From a movie database, select the top movies for the past weekend. Obtain a brief description, rating, and length of the top five movies. From the information you obtain, select the movie you would be most likely to go see. Save the file as MOVIE1.
7. Secure a list of the current best-selling books (fiction and non-fiction). Save the file as BOOKS1.

Duplexing

Simplex--Transmission in one direction only.

Half-Duplex--Transmission in both directions but only one direction at a time.

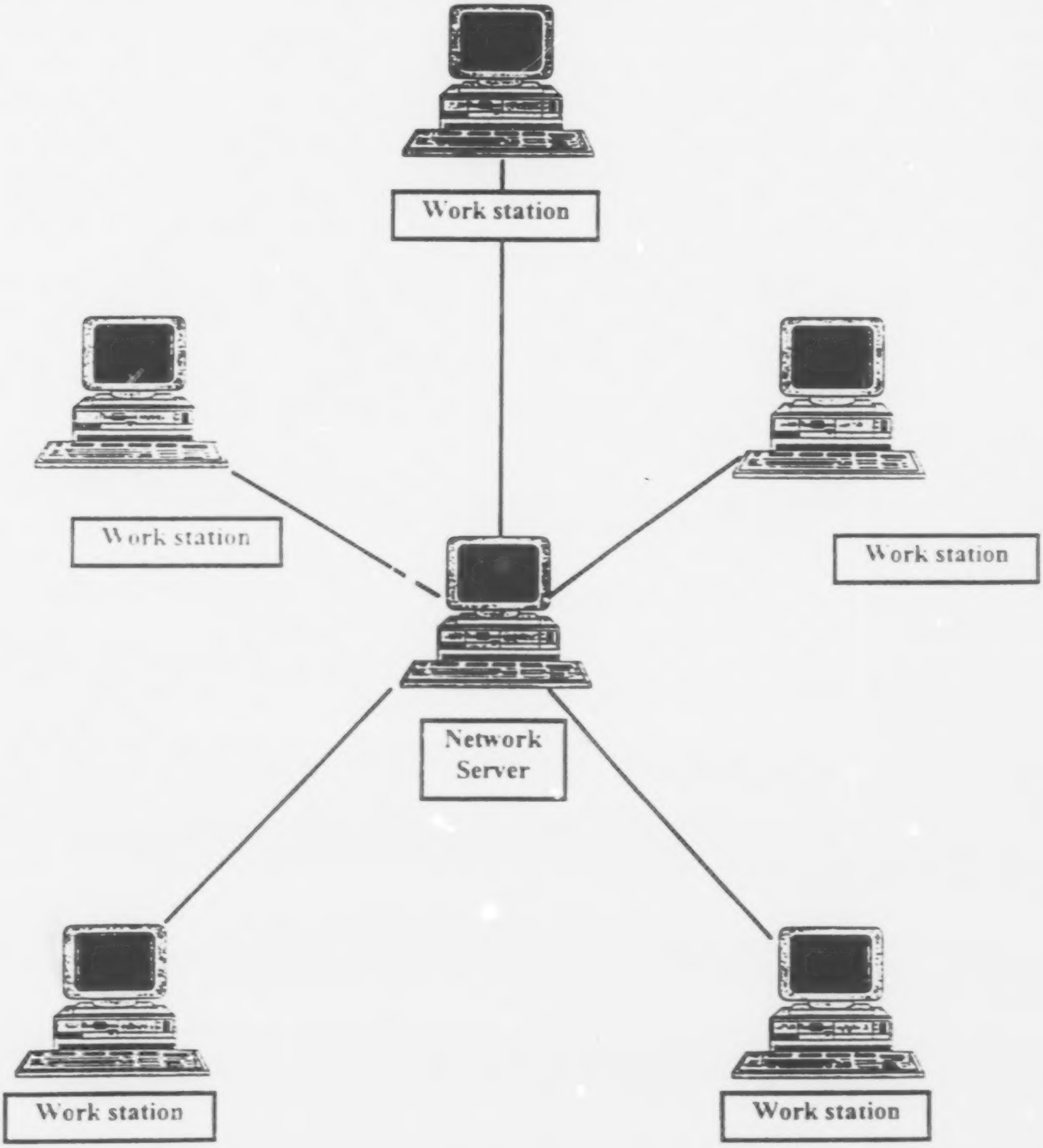
Full Duplex (or duplex)--Transmission in both directions simultaneously.

Transmission of data

- The transmission of information from one location to another by electronic means is called telecommunications.
- A gateway is used for connecting similar and nonsimilar communication networks together.
- Baud rate is the speed at which bits of information are sent or received.
- Pathways that carry data from one location to another are communication channels.
- If all the text received during telecommunication appears on the top line, with each new line overwriting the one before it, the other computer is not sending a line feed signal the computer
- Satellites are used to carry long distance communication by microwave.
- A device or portal that allows a user to send messages from one on-line service to someone on another on-line service is called a communications gateway.
- A device used to connect a computer to a telephone lines is called a modem.
- Telephone lines are used to carry long distance communication by fiber optics.
- A gateway is used to provide access to outside networks.
- A set of rules that govern action between two computers or network systems is called protocol. Protocols are necessary in communication in order to control the transmission of data.
- Eight data bits are required for the computer to represent a letter in a transmission.
- A modem's transmission cabling is classified as broadband.
- In telecommunications, real time performance (the amount of time to travel from point A to point B) is called throughput.
- Strands of glass through which light beams carry signals to transmit data and images are called fiber optics.
- The term telecommunication means the electronic transfer of information from one location to another.

- When defining the speed and format of communications, the communication software must be set for the baud rate, number of data and stop bits, and error-checking routine.
- Modem telecommunications software and modems have the capability of handling data and fax transmissions, but cannot broadcast directly to a satellite.

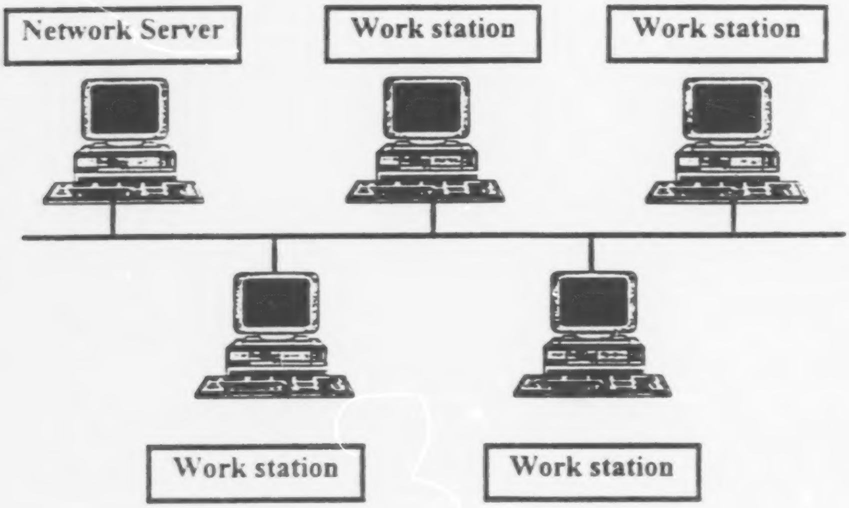
Star Topology


Work station
Work station
Work station
Network Server
Work station
Work station

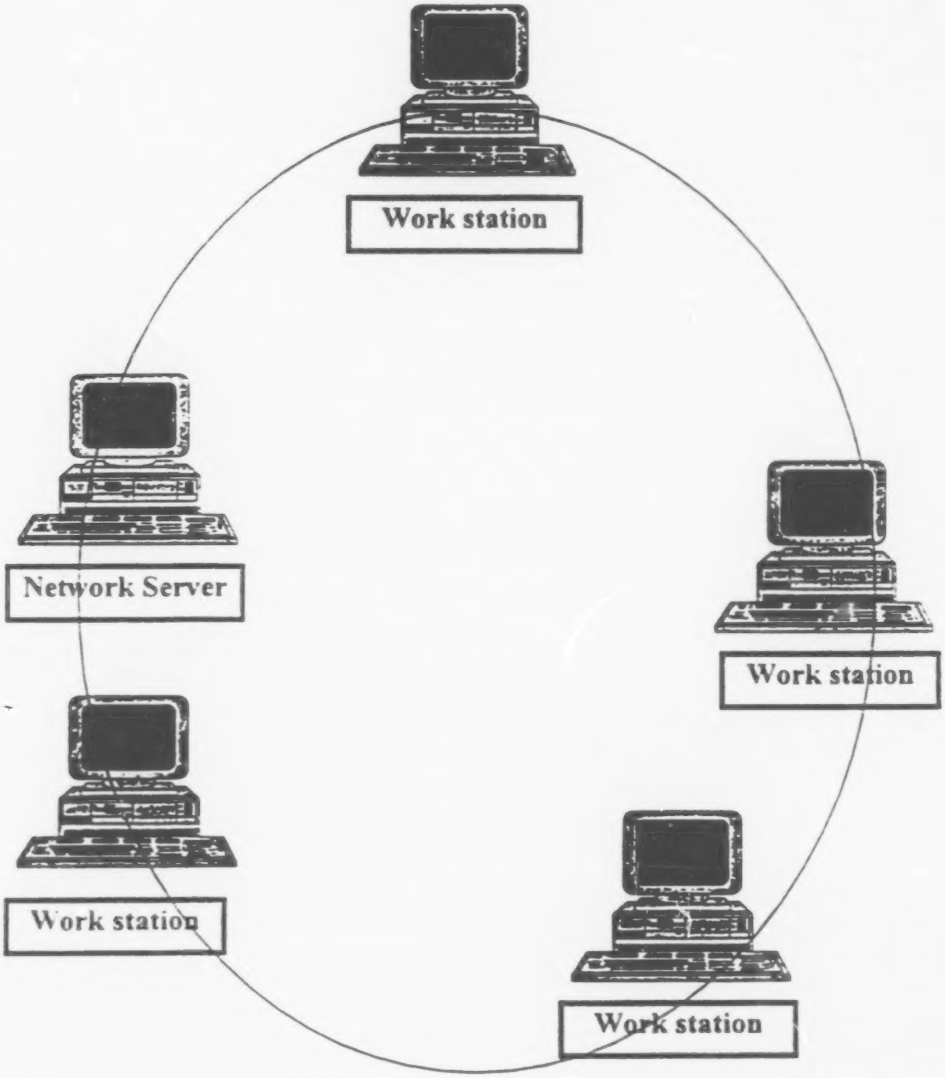
Networks

- Networking is the linking together of computers and peripheral devices by a communications system and at the same time allowing users at different locations to share files, hardware devices, and programs.
- A bridge is used for connecting similar communication networks together.
- In LAN utilization the workstation requires more computer capability than the fileserver does.
- The computer network topology in which each station is linked to a central computer is called a star topology.
- A local area network is an interconnection of intelligent computers located in a short-distance environment designed to share valuable resources, such as printers, disk drives and files.
- In a networking environment, a MAU is a multistation access unit.
- In a networking situation, STAR, BUS and RING are referred to as a network topologies.
- A local area network (LAN) is composed of a fileserver which operates the LAN and contains the software; a network interface card is a hardware device connected to the workstation that sends the data onto the network; and a workstation is an individual computer connected to the LAN via the network interface card.

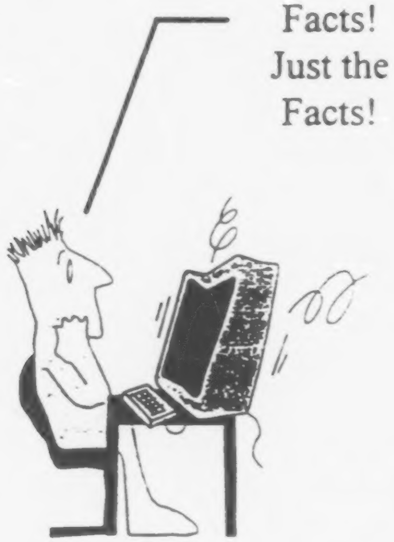
Bus Topology


Network Server
Work station
Work station
Work station
Work station

Ring Topology

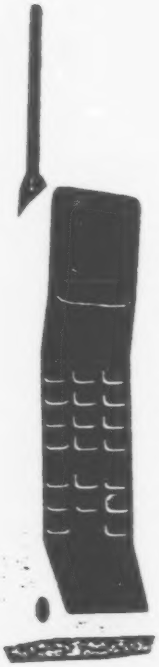

Work station
Network Server
Work station
Work station
Work station

Integration of Telecommunications and Other Software


Facts!
Just the
Facts!

- Graphics and telecommunications an be combined to edit a picture retrieved from a multimedia encyclopedia and sent via telecommunications.
- To download data from a remote site and integrate the data into a collection of information that can be accessed electronically in the future, database software is necessary.
- Electronic mail (memos, letters, reports) is usually generated with word processing software before uploading via telecommunications.
- Telecommunications allows the user to download files into a page layout created using desktop publishing software.
- Pictures, graphics, sound and motion picture files that can be downloaded or sent to other sites using telecommunications software is known as sound byte files.
- Telecommunication software does NOT integrate well with DOS.
- To download statistical data from a remote site and integrate the data into a statistical report with charts and graphs, spreadsheet software is necessary.
- A method for detecting errors in data transfer, defined in terms of odd or even, is known as parity.
- The verification of credit card numbers over the telephone by a department store clerk is an integration of database and telecommunications.
- Preparing and faxing a publication to a foreign country demonstrates the integration of desktop publishing and telecommunications.

- Accessing and using a telecommunications service is an example of integrating telecommunications and database programs.
- To download data from a remote site and integrate the data into a newsletter, desktop publishing software is necessary.
- Word processing and telecommunications software is necessary to edit an article retrieved from a multimedia encyclopedia and sent to another site.
- To download data from a remote site and integrate the data into a visual display to present to one or several people, presentation software is necessary.
- A communication function which includes arranging a group or individual meeting of people in different geographical locations is called teleconferencing.
- Word processing software is used for editing a file downloaded through telecommunications.
- Graphics and telecommunications software is necessary to edit a scanned picture and upload it to another site.
- Music files and voice data files that can be downloaded or sent to other sites using telecommunications software is known as sound byte files.



A growing area--

Cellular technology is a system for handling telephone calls to and from moving vehicles. Cites are divided into small geographic areas called cells. Telephone calls are transmitted to and from low-power radio transmitters in each cell. Calls are passed from one transmitter to another as the automobile leaves one cell and enters another. Computer signals are now being transmitted the same way. Watch this fast growing area!

Integration Activity 1

Access an information service and download files:

The company where you are employed is sending you on a business trip to Kansas City to speak on International Telecommunications. The meeting is scheduled for a month from today's date. Access a database service to obtain the following information. **Save the files as indicated. Print a copy of each file.**

A. Use the travel database to obtain flight information from the nearest airport to Kansas City. You will be staying three days. Save the file as FLIGHT.

B. From the travel database, select a hotel. The conference will be held at the Hyatt Regency, Crown Center. You may stay at the Hyatt or a nearby hotel. Your company will reimburse you at the rate of $80 per night. Coordinate your stay with the flight schedule. Save the information as HOTEL.

C. Access both the national and foreign news service by category to obtain the latest news articles on international telecommunications. Develop a search strategy before going on-line. Limit your search to five articles. Save the file as INTEL.

D. Your speech should include the most current information about modem technology. Search the news database for any news articles on modems; search the shopping service for the latest brands and prices; search the encyclopedia service for definitions. Save the files ad MODEM1, MODEM2, and MODEM3

E. Search the weather database for the weather predictions for the next month in Missouri. Save the information as WEATHER.

F. Using a word processor, compile all the above information into a speech; name the file SPEECH. Prepare handouts for the audience; name the file HANDOUT.

Optional

G. A laptop computer and an LCD (Liquid Crystal Display screen) is available for you to take with you. The conference organizer has notified you that an overhead projector is available for you to use at the site. Use a presentation program and prepare slides to show during the presentation.

Integration Activity 2

Develop a message for voice mail from the following facts:

Mr. Ivan Smith would like for you to call Ms. Sue Jones and schedule an appointment for Thursday to discuss the Brown case. The meeting needs to be at 10 am in your office. When you reach the company where Ms. Jones is employed, the operator puts your call through to her office. She is not available and her voice message asks you to leave a message. Using a word processor, compose the message you would leave for Ms. Jones' voice mail system Print a copy

Integration Activity 3

Log-on to a Bulletin Board Service:

Log-on to a local bulletin board system and read the help file on how to download a file from that system. Locate the command to view the files that the system has in the file directory. While scanning through the file directories, locate the name of a file you wish to download. Use the system's appropriate commands to download the file of your choice. Make sure you have a data disk available so the file can be saved to disk. Print a copy

Integration Activity 4

Log-on to a database service:

Using a commercial database service, download the following information. The file names are indicated below. **Print a copy of each file.**

1. Search the financial news for articles on corporations in the news. Select five articles to download. Save the files as COR1, COR2, COR3, COR4, COR5. Search the symbol database for the stock symbol for the five corporations. Save the printouts for later use.

3. Search the historical quotes database and obtain the quarter stock price averages for the previous year for the five companies. Save the files using the stock symbol.

4. Obtain the current stock price of the five companies. Save the printouts for later use.

5. Obtain a Standard and Poors report on the five corporations. Name the files SP1, SP2, SP3, SP4 and SP5. Save the printouts for later use.

6. Using a word processing program, print a hard copy of the quarter stock prices for the previous year. The files were saved under the stock symbol. Using a graphics program design a line graph of the stock prices for the previous year quarters. The graphs should include a heading of the company name, subheading showing the year, legends should indicate appropriate quarters, and a Y-axis labeled PRICE. Save the graphs as STOCK1, STOCK2, STOCK3, STOCK4, and STOCK5. Each graph should be printed in landscape on a full sheet.

7. Using a spreadsheet program, design a spreadsheet for stock investments over a six week period.

    A. The spreadsheet should include the following headings: Current Date, Company Name, Stock Symbol, Current Price, Number of Shares, Total Investment, and Balance.
    B. The Beginning Balance is $50,000. Enter a formula in the Balance column that calculates a running balance and copy the formulas as necessary.
    C. From the hard copy of current stock you obtained earlier from the database service, enter the stock prices of the corporations you selected for investment and the number of shares you wish to purchase.

E. From the information obtained compose a report on the five corporations researched. Indicate whether you would actually invest money in the corporations. The report should have a heading and appropriate subheadings, doubled spaced, and a minimum of three pages in length. Utilize the spell checker and thesaurus. Save the file as STOCKRPT and print a copy.

Integration Activity 5

Up-load an E-mail file:

Using a word processing software, write a penpal letter to a student in another school. Include the following information: name, school, grade, age, family information, favorite music/video. Other information that might be included: plans after graduation, favorite subject, school news. Save the file as ASCII. Upload the letter via E-mail to another school.

Integration Activity 6

Integrate telecommunications with desktop publishing:

Log-on to a database service (a CD-ROM with appropriate information may be substituted for this activity). Access information on Computer Crime. Using desktop publishing software, design a newsletter with appropriate graphics. Your instructor will provide you with more specific instructions.

Activity 7

Use a facsimile machine, fax a copy of your newsletter completed in Activity 6 to students at another school.

Title: Integrating the Internet into PowerPoint

Author: William Coker

School: McMichael High School

Address: 6845 Highway 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: Computer Applications II/III

Grade Levels: 10-12

Time Required: Two to five classes

NC Standard Course of Study Goal:

Integration of software and graphics, using the Internet (telecommunications).

Learning Outcome:

Students will learn the process of integrating graphics and information obtained from the Internet into a PowerPoint presentation.

Background Information/Pre-Lesson Instructions:

Students must have the skills to use the Internet to search for specific topics, as well as download information. Students must also have a basic knowledge of PowerPoint.

Materials/Equipment/Technology:

Access to the Internet, Microsoft PowerPoint, a computer, overhead projector and LCD panel

Instructional Strategies/Procedures:

Only give students information about project requirements. Do not assign topics, but have students develop their own topics. Allow students the opportunity for creativity. Encourage students to try to step beyond the requirements of the project to make their presentation better.

Student Evaluation:

Students must present their presentations before the class using an LCD panel and an overhead projector. Students will be graded on their presentation style, creativity and overall look.

Follow-Up Activities:

Encourage students to use this type of project in other classes, as well as other project presentations in this class.

Suggestions for Replication:

This project could be done in any type of class. It would be very effective for students in English or Science to use an Internet PowerPoint presentation instead of the typical paper or project.

Title:	Immigration Patterns	
Authors:	Jeff Holcomb	Ricki Peto
School:	John T. Hoggard High	Pasco High School
Address:	4305 Shipyard Blvd. Wilmington, NC 28403	Pasco, Washington rpeto@oneworld.owt.com
Phone Number:	(910) 350-2072	
Subject Area:	US History	
Grade Level:	11	

Time required:

Approximately two class periods; one to compile and send data and one to analyze and compare participating schools' responses.

NC Standard Course of Study Goal:

10.4

Background Information/Pre-Lesson Instructions:

Students should understand the concept of Immigration and its role in shaping the social and political character of America.

Materials/Equipment/Technology:

E-mail connection

Instructional Strategies/Procedures:

1. Advertise your project via a listserver. Kidsphere is a very broad reaching one.
2. Coordinate a schedule for sharing information. Allow plenty of time.
3. Have students exchange short introductory letters with participating schools, describing themselves and their community. Having them work in groups expedites this.
4. Have students find a recent (last 20 years) immigrant to America and interview them as to why they came and what their experiences have been.
5. Combine this information with other relevant data available about the makeup of your community, organize it, and exchange it with participating schools.
6. Compare the data from other schools with your own school. Have students hypothesize reasons for apparent differences.

Student Evaluation:

A short paper summarizing differences and similarities noted.

Follow-Up Activities:

Have students predict future patterns in immigration.

Suggestions for Replication:

Obviously this project requires at least one participating school in a different region of the US If you get no "bites" on a listserver, try some of the "key pal" lists and see if any of the students are interested. Also, you can search for high school homepages on the Internet.

Title: An Earth History Calendar

Author: Ruth Mann

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: Earth Science

Grade Levels: 11 - 12

Time Required: 90 minutes for research
(45 minutes for sharing)

NC Standard Course of Study Goals:

Goals 1,2,3,5
Study the evolution of life during Crytozoic time.
Calculate the relative lengths of three divisions of Crytozoic time.
Explain how Earth was formed and how living organisms may have originated and evolved.
Identify and evaluate the importance of events of Crytozoic timer.

Background Information/Pre-Lesson Instructions:

Discussion on Cryptozoic Time:
- Formation of the Earth
- Origin of Life
- Evolution of complex organisms

Materials/Equipment/Technology:

Articles from Science Teacher and Today's Science (student readings)
Computerized card catalog
CD-ROM
Newsbank
America On-Line and/or other Internet access

Instructional Strategies/Procedures:

In cooperative learning groups students explore and create theories on Earth's formation and the evolution of life during a specified period of time. This was to be accomplished through the integration of Science as Inquiry, Science and Technology, and the History and Nature of Science.

Student Evaluation:

Students were only moderately successful due to limited time using technological equipment. Each group shared findings as well as personal theories formulated during a portion of a class setting. Pictures and time lines were generated and shared.

Follow-Up Activities:

Dinosaurs:	When did they appear?
	How long did they live?
	Identify using foot prints.

Suggestions for Replication:

This project can be easily repeated in other Earth Science classes. Maybe it could be extended to include other periods of time.

Title: Special Topics in Earth Science

Author: Martha Honeycutt

School: McMichael High School

Address: 6845 Highway 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: Earth Science

Grade Levels: 11 - 12

Time Required: Three Days (5 1/2 hours)

NC Standard Course of Study Goal:

Goal 5: The learner will have an understanding of the relevance of current topics in Earth Science.

Background Information/Pre-Lesson Instructions:

One semester of Earth Science, three-page summary with Internet and print sources and bibliographic citations

Materials/Equipment/Technology

Internet access and magazines

Instructional Strategies/Procedures:

Assignment given will allow students to use print and nonprint materials. Students will be apprised of the user policy and given instructions for using the Internet. Addresses will be provided for the search.

Student Evaluation:

Oral presentation of reports. Reports will be read by teacher to determine the focus and expansion of topics.

Follow-Up Activities:

Students can share pictures with the class and lead class discussion.

Suggestions for Replication:

1. Use the addresses from this class for the next class search.
2. Prepare a handout of addresses, providing opportunity for students to add to the list.
3. Use small groups/cooperative groups for searching and presentation of information.

Title: Research Careers and Topics in Science

Author: Billy Bunn

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: Physics and Chemistry

Grade Levels: 11-12

Time Required: Varies

NC Standard Course of Study Goals:

Goals 9.1 and 9.2: Students will have a knowledge of careers available in chemistry and physics and will understand the relevance of current topics in science.

Background Information/Pre-Lesson Instructions:

The students will study and discuss various fields in science. Guest speakers from local industry (textiles, chemistry) will come and talk to students about career opportunities.

Materials/Equipment/Technology:

Computer(s) with Internet connection
Netscape and bookmarked search engines
General reference books
Guest speakers

Instructional Strategies/Procedures:

1. Introduce students in cooperative learning groups to how to access the Internet via Netscape.
2. Allow students to conduct searches using search engines (hands-on use of technology).
3. Have students use other resources to search for information.

Student Evaluation:

Students will give a report on their findings to the class.

Follow-Up Activities:

Contact local (in-state) scientists in the fields which the students researched.
Use E-mail to communicate with scientists.
Use CU-SeeMe to communicate with scientists.

Suggestions for Replication:

This project can be repeated with other classes

Title:	Research for English Class
Author:	Ann Cutler
School:	Northside High School
Address:	7868 Free Union Road Pinetown, NC 27865
Phone Number:	(919) 943-6341
Subject Areas:	AP English American Literature
Grade Levels:	11 - 12
Time required:	Varies (all semester)

NC Standard Course of Study Goals:

Students will research a variety of topics.

Background Information/Pre-Lesson Instructions:

Class discussion
Readings from textbook

Materials/Equipment/Technology:

Computer with Internet access
Word-processing program

Instructional Strategies/Procedures:

Have students use the Internet to find information on whatever topics they are currently studying in literature.

Student Evaluation:

1. Students' contributions to class discussion.
2. Written reports on topics.
3. Extent to which students incorporate Internet information into their projects.

Follow-Up Activities:

Students and teachers can use the Internet to find additional information on most topics which they cover in class so the follow-up activities using the Internet for research are endless. (My AP English and American Literature students used the Internet for research throughout the school year. Their topics were as varied as they are, ranging from Renaissance poetry to Western outlaws. One of the most gratifying searches was done by a young man who was researching the life of Belle Starr. Needless to say, our local resources were just a bit limited. The Internet, however, put him in touch with a professor at the University of Missouri who was apparently the world's foremost authority on this infamous lady. We also had great successes with White Water updates and the prevalence of hate groups in this country. The Internet has opened the entire world to students who would otherwise be limited to coastal Carolina. The possibilities for research and discussion are now limited only by the students' imaginations. The Internet has truly been a Godsend.)

Suggestions for Replication:

Using the Internet as a tool for finding additional information to enrich English classes should be an on-going process. Teachers and students can use this wonderful new resource throughout the school year.

Title: AP Biology Internet Reports

Author: Vicky Wall

School: McMichael High School

Address: 6845 NC 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: Biology

Grade Levels: 11-12

Time Required: All semester

NC Standard Course of Study Goals:

1, 3, 5 (basically all goals can be included).
Students will become more comfortable using the Internet.
Students will keep up with current event topics which correlate with class lessons in biology.

Background Information/Pre-Lesson Instructions:

Lecture topics covered in class

Materials/Equipment/Technology:

Textbook
Computers with Internet access

Instructional Strategies/Procedures:

During the semester, each student will read and summarize eight biology related magazine articles. However, each student has the option of conducting three Internet searches relating to biology in place of a magazine article. Students who decide to conduct Internet searches will locate an Internet site/database related to the AP Biology curriculum by using a search engine such as Yahoo or by finding addresses in magazines, newspaper articles, or on television programs. Then the student is to record the following information on the Internet Travel Log:

- Name of database (given on the home page or first screen of information)
- Address (URL..Universal Resource Locator)
- Description of the site (3-5 sentences)
- Five to seven sentences on how this information might be used.

Student Evaluation:

The summaries are graded. Oral reports are also given by students.

Follow-Up Activities:

Lab activities, discussion in class

Suggestions for Replication:

Many topics can be expanded upon and followed up to the next year, such as

1) Antarctic ozone depletion
2) monarch butterfly migration

Title:	Discovery of Molecular Shapes
Author:	Lawson Greenwood
School:	John T. Hoggard High School
Address:	4305 Shipyard Blvd. Wilmington, NC 28403
Phone Number:	(910) 350-0220
Subject Area:	A.P.Chemistry
Grade level:	11-12
Time required:	1 class period

NC Standard Course of Study Goal:

9.1

Background Information/Pre-Lesson Instructions:

Students should understand the concepts of molecular bonding, VSEPR theory, hybridization, resonance, polarity, exceptions to the octet rule and the molecular orbital theory.

Materials/ Equipment/Technology:

Netscape Navigator access, overhead panel

Instructional Strategies/Procedures:

1. Introduce a discussion of Bucky Balls, a new carbon molecule, show the structural formula, discuss possible uses, then discuss actual uses.
2. Get into Web Crawler, and project to the entire class using the overhead panel.
3. Search for "Molecular Models" and select from the possible 22093 articles giving information on molecular models.
4. Select one of the articles, i.e.,"Indigo Molecular Models" or "Institute for the Organically Challenged" and show the graphic of the molecule. Predict polarity, solubility, isomer possibilities, chemical stability, predicted melting and freezing points, and possible uses.
5. Peruse the article to determine properties and actual uses. Compare predicted to actual properties and uses. Have students discuss reasons for possible variations.

Student Evaluation:

Have students predict properties and uses of a new molecule.

Follow-Up Activities:

Have students surf the net for new molecular substances including methods of discovery. Have students design molecules via computer.

Suggestions for Replication:

Have students use some of the good articles for exam review. Students can use Kidsphere to chat with other chemistry students about the new molecules that they have designed and the feasibility of making the molecule much as scientists in different countries share their research.

Title: Internet Basics for Teachers

Author: Barbara Cartwright

School: Northside High School

Address: 7868 Free Union Road
Pinetown, NC 27865

Phone Number: (919) 943-6341

Subject Area: Staff Development

Grade Level:

Time Required: Minimum of 1 hour per group

NC Standard Course of Study Goals:

1. Learn Internet searching skills by looking for information on specific topics.
2. Become acquainted with Internet search engines.
3. Use knowledge of available information to plan lessons utilizing the Internet in the teachers' individual disciplines.

Background Information/Pre-Lesson Instructions:

Ask teachers to bring specific questions whose answers might be found on the Internet.

Materials/Equipment/Technology:

Computer(s) with Internet connection
Netscape and bookmarked search engines

Instructional Strategies/Procedures:

1. Introduce teachers to the equipment and software.
2. Demonstrate the different ways to access information (bookmarks, search engines, Internet addresses, etc.).
3. Discuss the importance of planning in order to optimize students' success in finding appropriate materials.
4. Discuss the importance of students being critical "surfers."
5. Allow teachers to conduct one or two searches using the different ways to access information and search engines–Yahoo and Alta Vista suggested.

Evaluation:

Teacher planned lessons using the Internet as one research tool.
Increase in use of Internet by teachers in the core curriculum areas.

Follow-Up Activities:

Suggestions for Replication:

This project can be easily repeated to train additional teachers in the use of the Internet.

Title: Internet Connecting to all the Right Places

Author: Ellen Hawkins/Lou Ann Jessup
(Media Coordinators)

School: McMichael High School

Address: 6845 NC 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: Staff Development

Grade Level:

Time Required: Flexible

NC Standard Course of Study Goals:

To provide instruction for teachers to learn terminology involved in working with the Internet and to acquire the skills necessary to use Netscape and to use search engines to locate, save, and print information from the Internet.
To explore ideas on integration into curriculum.

Background Information/Pre-Lesson Instructions:

Discussion of Internet technology and its usefulness.

Materials/Equipment/Technology:

1. LCD panel/overhead
2. Transparencies to correspond with handouts
3. Handouts to correspond with demonstration
4. Computer lab with multiple access

Instructional Strategies/Procedures:

Demonstration:

Overhead transparencies for introduction
LCD panel for demonstration as participants conduct hands-on activity

Student Evaluation:

Completion of assignment

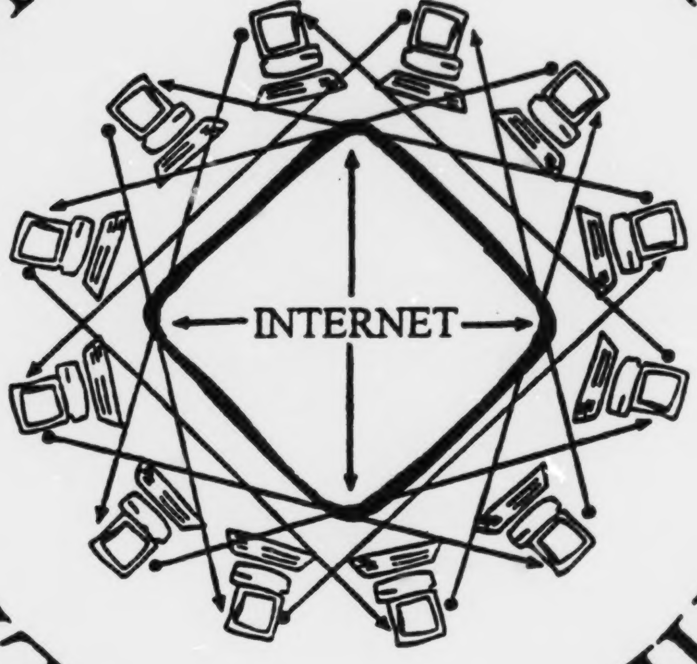
Follow-Up Activities:

Continued use of the Internet
Instruction evaluation for feedback from participants

Suggestions for Replication:

1. Large group, small group, individualized instruction
2. Update graphics for Netscape. etc.
3. Update addresses to reflect specific needs of group
4. Session of 10 hours over a short period of time (6 weeks, etc.)
5. Additional session of 10 - 20 hours to cover additional options available and to integrate information into curriculum
6. Allow lots of time for hands-on searching with instructor available to answer questions

CONNECTING TO ALL ~ THE RIGHT PLACES ~



ehawkins@mail.dmhs.rockingham.k12.nc.u
ljessup@mail.dmhs.rockingham.k12.nc.u

What is the Internet?

- Confederation of global networks Unix system, LANs, PCs, Macs
- The Internet provides file transfer, remote login, electronic mail, news and other services.

Why was the Internet created?

- The Internet was created about 25 years ago.as a way for scientists to share information and ideas.

Types of Internet Access

- Electronic Mail (email)
- File Transfer Protocal (FTP)
- Gopher
- Newsgroups & Mailing Lists
- Telnet (remote login)
- World Wide Web (WWW)

Internet Addresses

- World Wide Web
http://www.whitehouse.gov

- Electronic mail

user@stech.cnidr.org

World Wide Web Access

- Web Browsers

  Netscape Navigator
  Mosaic
  Cello

- Hypertext (point/click)

Tips for Speedy Searches

- Be Specific
- Vary Search Criteria
- Limit number of matches

Netscape

A World Wide Web Browser

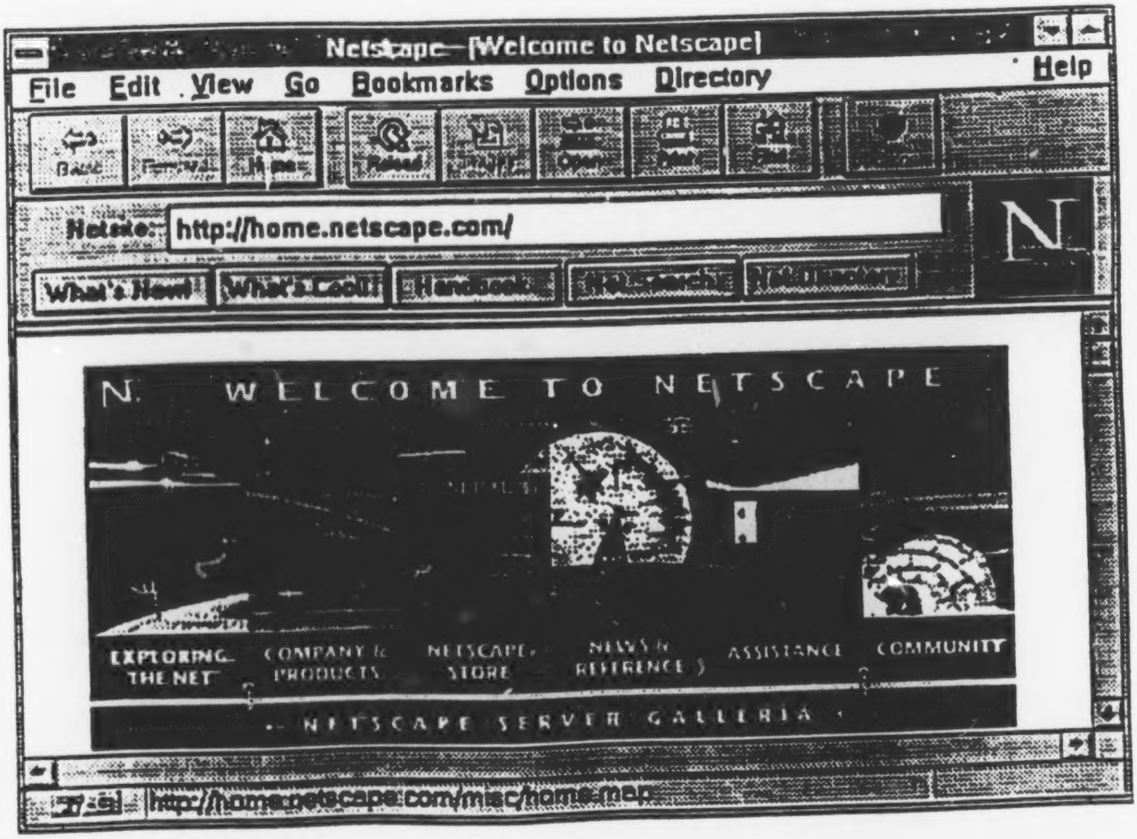
STARTING NETSCAPE

The Netscape icon is "the big N"

Click here (two times)

HOME PAGE

The first screen you see after connecting to a website is its 'Home Page'. As you point and click on additional links or hot buttons on the page you will go deeper into that website, or see more 'pages'.


Netscape - [Welcome to Netscape]
File
Edit
View
Go
Bookmarks
Options
Directory
Help
Back
Reload
What's New!
What's Cool!
Handbook
N. WELCOME TO NETSCAPE
EXPLORING THE NET
COMPANY & PRODUCTS
NETSCAPE STORE
NEWS & REFERENCE
ASSISTANCE
COMMUNITY
NETSCAPE SERVER GALLERIA

Netsite: http://home.netscape.com/

http://home.netscape.com/misc/home.map

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EXPLORING THE NET

UNIFORM RESOURCE LOCATORS (URL'S)

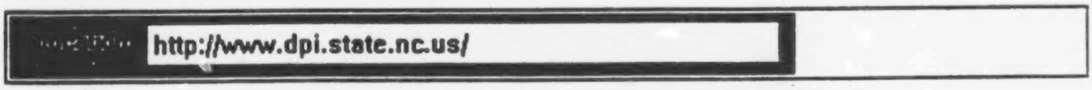
When you enter an 'address' you are giving the software instructions to find specific information located on a server......somewhere in the world. Requests may move through several servers before reaching the final destination.

- URL'S are of the form:

  resource://address/directory-path/file name

  EX: http://ww.infi.net/nr/triad.html

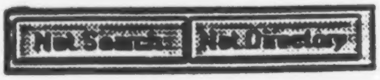
- You may enter a URL by:
  - Selecting file from menu bar, open location, type the URL, click open.
  - Click the navigation button open, type the URL, click open.
  - Directly type the URL in the location box on the NETSCAPE screen, press enter.



http://www.dpi.state.nc.us/

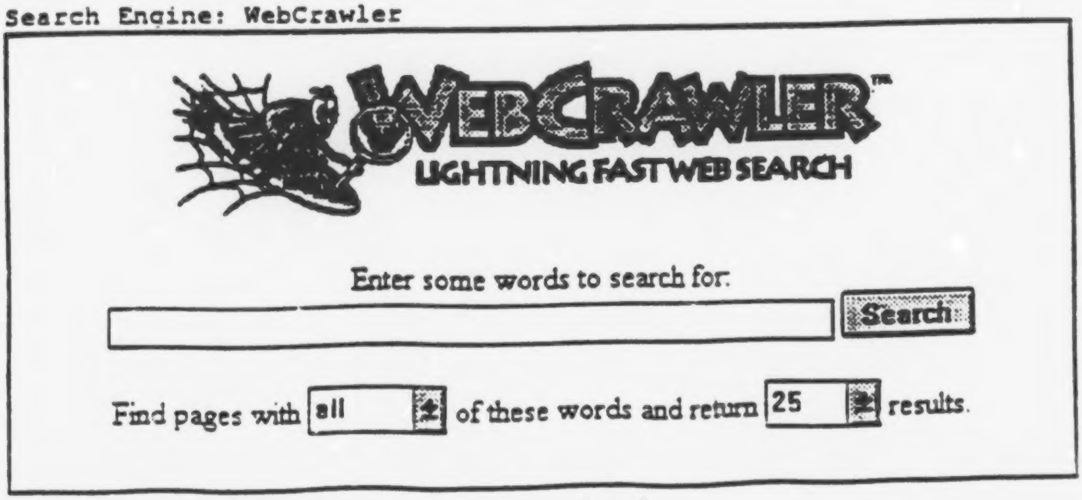
- URL'S contain organizational and geographical clues about websites.
  - Organizational categories: com, edu, gov, mil, net, org
  - Geographical: au, Australia; ca, Canada; dk, Denmark; jp, Japan; us, United States

LOOKING FOR LINKS TO ALL THE RIGHT PLACES



Another method of locating websites, if you do not have a specific address, is to use the Net Search and the Net Directory options available at the Netscape Home Page. Clicking on either of these options will link you to search engines/directories for general or detailed searching. The choice is yours!

`Search Engine: WebCrawler`



Enter some words to search for:

Find pages with all of these words and return 25 results.

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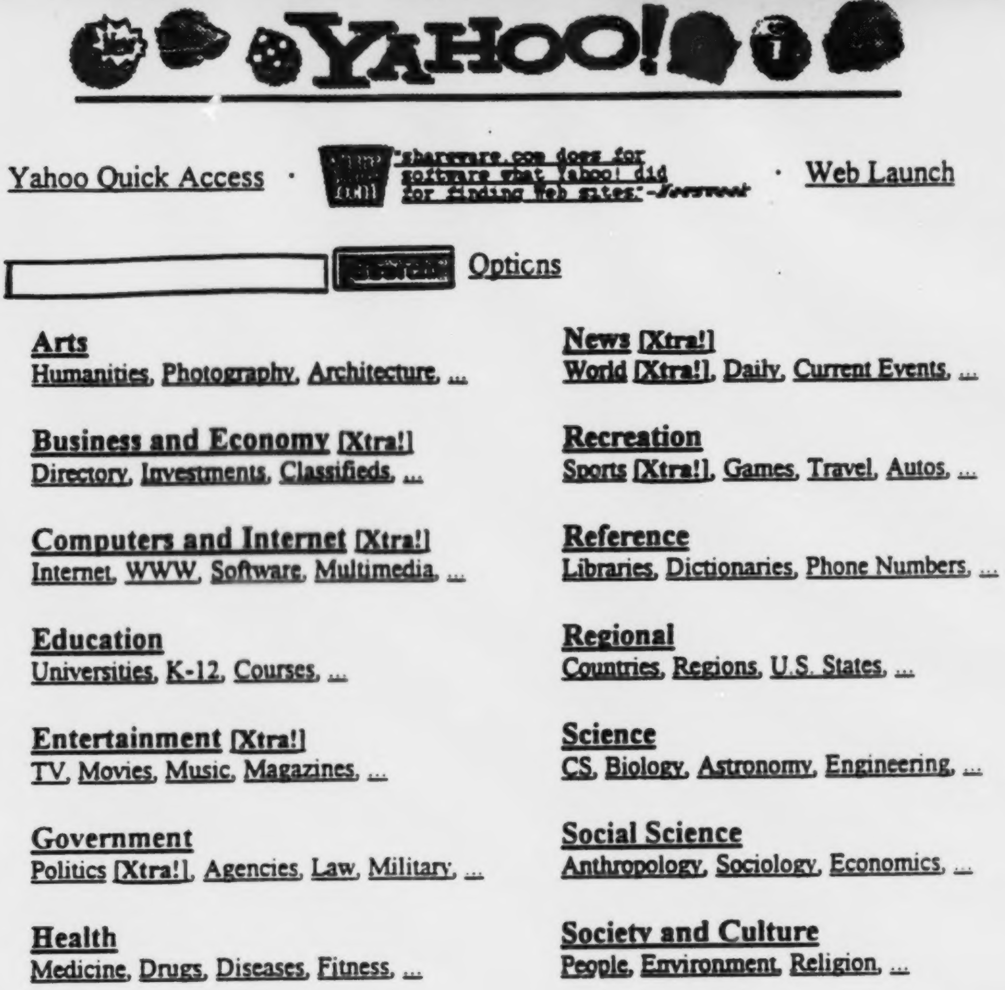


Yahoo Quick Access · "shareware.com does for software what Yahoo! did for finding Web sites." -[illegible] · Web Launch

Options

Arts
Humanities, Photography, Architecture, ...

Business and Economy [Xtra!]
Directory, Investments, Classifieds, ...

Computers and Internet [Xtra!]
Internet, WWW, Software, Multimedia, ...

Education
Universities, K-12, Courses, ...

Entertainment [Xtra!]
TV, Movies, Music, Magazines, ...

Government
Politics [Xtra!], Agencies, Law, Military, ...

Health
Medicine, Drugs, Diseases, Fitness, ...

News [Xtra!]
World [Xtra!], Daily, Current Events, ...

Recreation
Sports [Xtra!], Games, Travel, Autos, ...

Reference
Libraries, Dictionaries, Phone Numbers, ...

Regional
Countries, Regions, U.S. States, ...

Science
CS, Biology, Astronomy, Engineering, ...

Social Science
Anthropology, Sociology, Economics, ...

Society and Culture
People, Environment, Religion, ...

HTML/LINKS/HOT BUTTONS

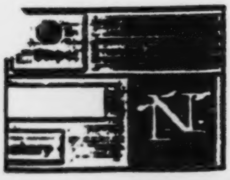
Links provide connectivity or cross reference between websites and make access easier. These links can be either text or graphical. Textual links are typically blue or purple in color and usually underlined. Graphical links may appear in a variety of shapes or sizes and have blue or purple borders. A common characteristic of all links is the cursor change from an arrow to a pointing finger.

1. About Conservation (who we are and what we do).
2. Just The FAQs
3. Great Gifts That Everyone Will Appreciate

Note: URL appears at bottom of screen to correspond to hypertext when arrow changes to pointing finger.

Links are activated by clicking once on it and the pointing finger changes to an hour glass. As the website is contacted and loaded to the computer screen you will see activity at several points on the screen.

> —WAIT— Allow the computer time to complete downloading the information. The activity at the bottom of the screen indicates the progress in accessing the website. Wait until the document is fully loaded before scrolling around the page(s).

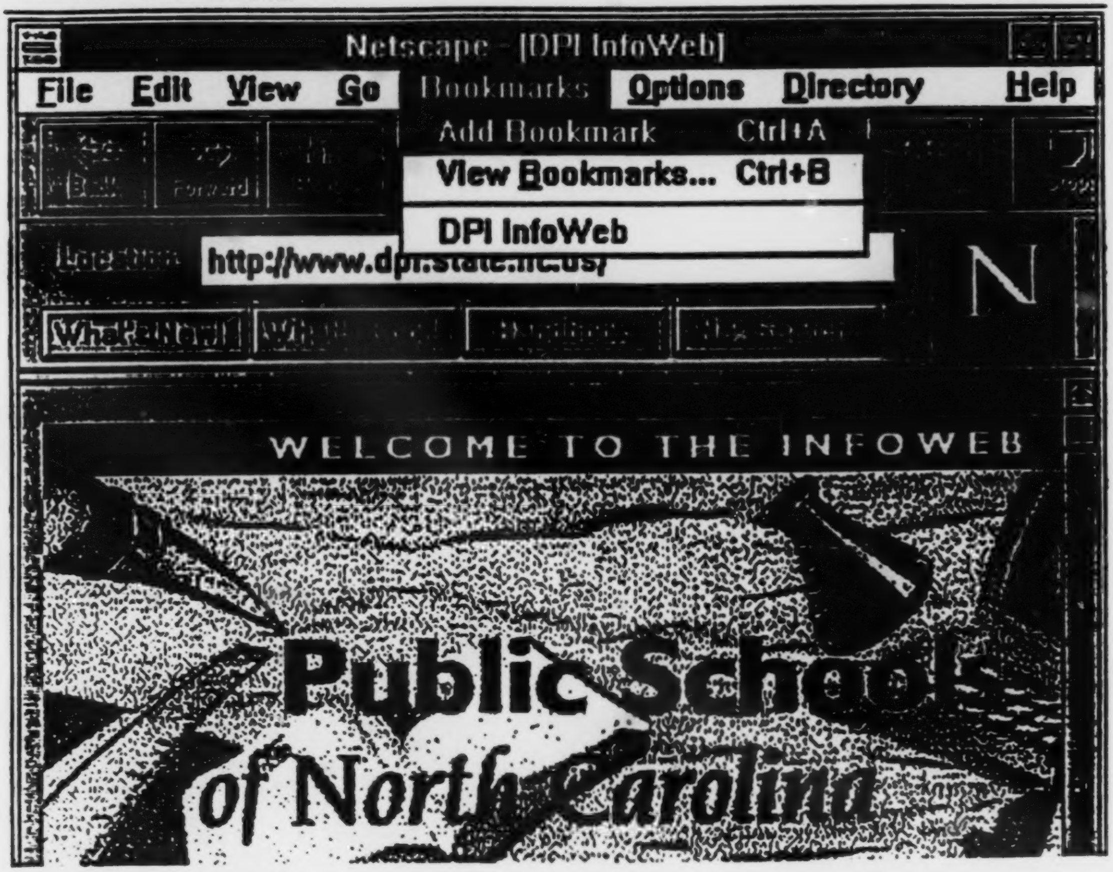


When Netscape is locating and loading a document a 'meteor shower' occurs on the "Big N' at the upper right corner. Sometimes it appears that the loading has stopped or stuck. Click the stop button on the tool bar. This ususally will complete the loading process. However, it might also return you back to the Netscape Home Page. If this happens...start over!

BOOKMARKS

The menu option 'bookmarks' allows you to create a list of websites you will access on a repeat basis.

- ADD a site when the URL is showing in the location box, select bookmarks, click add.
- VIEW an URL by selecting bookmarks, view. Select and click the highlighted address to activate the search for the website.


Netscape - [DPI InfoWeb]
File
Edit
View
Go
Bookmarks
Options
Directory
Help
Add Bookmark Ctrl+A
View Bookmarks... Ctrl+B
DPI InfoWeb
Location:
http://www.dpi.state.nc.us/
N
What's New!
WELCOME TO THE INFOWEB
Public Schools
of North Carolina

SAVE TO DISK

** PLACE FORMATTED DISK IN A DRIVE **

- Select file from menu bar
- Select save as
- Select file type
- Select a drive
- Click ok–data is downloaded to disk
- –WAIT– for data to complete downloading

NOTE: Files have different file extensions. When saving a file the file type must correspond with file extension included in URL.

** LVIEW

This option is necessary for viewing files dowloaded with graphics.

- Select LVIEW from icon screen
- Select file
- Select open, locate file name, click to activate loading procress, wait for loading to be completed.

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EDUCATION

NC DEPARTMENT OF PUBLIC INSTRUCTION
--- http://www.dpi.state.nc.us

ERIC --- gopher://ericir.syr.edu

WWW for EDUCATION --- http://k12.cnidr.org/

CAREER INFORMATION

Monster Board --- http//monster.com

Online Career Center --- http://www.occ.com

Career Path --- http://www.careerpath.com

SAT Prep Course Online --- http://www.testprep.com

Fishnet --- http://www.webpress.net/sbi/Open.html

College Guide --- http://www.webpress.net/sbi/ACG/CGTOC.html

SCIENCE

Purdue Weather Processor Home Page --- http://thunder.atms.purdue.edu/

NASA --- http://spacelink.mscf.nasa.gov

Nine Planets --- http://seds.lpl.arizona.edu/nine planets/nine planets.html

North Carolina School of Math and Science --- http://www.ncsm.edu/

Earthquake Information ---
http://info.er.usgs.gov/research/environment/hazards/earthquakes/earthquake
education.html

National Library of Medicine --- http://www.nlm.nih.gov/

Virtual Frog Dissection Kit —http://george.lbl.gov.80/vfrog/dissect.html

The Froggy Page ---http://www.cs.yale.edu/homes/sjl/froggy.html

The Electronic Gourmet Guide — http://www.2way.com/food/egg/

MATH

Math World Wide Web —http://ted.math.lsa.umich.edu/

Geometry Center --- http://www.geo.umn.edu

NC Department of Public Instruction --- http://www.dpi.state.nc.us

Appetizers/Lessons for Math and Reason ---
http://www.com.org/~aselby/lesson.html

Math Yellow Pages ---http://theyellowpages.com/mathematics.htm

SOCIAL STUDIES

National Council for Social Studies --http://www.ncss.org/home/ncss/

CapWeb --- http://policy.net/capweb/congress.html

THOMAS --http://thomas.loc.gov

World Fact Book 1995 --http://www/odci.gov/cia/publications/95fact/index.html

North Carolina Encyclopedia — http://hal.dcr.state.nc.us/cover.htm

White House --http://www.whitehouse.gov

Medieval History --- http://www/georgetown/edu/labyrinth-home.html

Human Rights Library --- http://www/umn.edu/humanrts/

LANGUAGE ARTS

William Shakespeare — http://the-tech.mit.edu/Shakespeare.html

Greek Mythology — http://info.desy.de/gna/interpedia/greek_myth.html

Literature Yellow Pages — http://theyellowpages.com/literature.htm

Poetry — http://www.imm.com/raystuff/poetry.html

Poetry — http://204.91.84.33/artenter/literat/poetry/poetry.htm

MAGAZINES /NEWSPAPERS

*** Classroom Connect —http://www.wenthworth.com

Internet World --- http://www/mecklerweb.com:80/iw/

Pathfinder -- http://www/pathfinder.com/

Scholastic -- http://scholastic.com.2005

Electronic Newstand ---http://www.enews.com

News Link --- http://www/newslink.org/newslink

Table of Contents ---http://www/magbrowse.com

Nando Times/Raleigh News and Observer —
http://www.nando.net/newsroom/nt/nando.html

SURF'N THE NET...

As part of the Internet activity you will complete the following brief assignment.

**** Assignment due:*

1. LOCATE 3 Internet sources related to your teaching area.

    A. Give the URL, Home Page Title, and 2-3 sentence description for each site.

2. SAVE information from one source on diskette.

    A. Include the file name and your name on the diskette.

    B. Return the diskette to instructor (diskette will be returned to you).

3. PRINT information from one source.

    A. Include the URL and Home Page Title with your printout.

Title: E-mail

Authors: Ellen Hawkins/Lou Ann Jessup

School: McMichael High School

Address: 6845 Highway 135
Mayodan, NC 27027

Phone Number: (910) 427-5165

Subject Area: Staff Development

Time Required: Flexible

NC Standard Course of Study Goals:

Library /Media Goal 3.1

Learning Outcomes:

1. Participants will be able to use E-mail package to correspond with others at local, state, regional, national and international levels.
2. Participants will become familiar with selected listservers.
3. Participants will become familiar with terminology.

Background Information/Pre-Lesson Instruction:

Familiarity with computer

Materials/Equipment/Technology

1. List of listservers (Tile.Net)
2. Transparencies for introductory materials
3. Simulated Internet access
4. Networked lab
5. LCD panel for group presentation

Instructional Strategies/Procedures:

1. Group instruction using overhead transparencies
2. LCD panel for onscreen projection
3. Hands-on activities, time to work individually or in small groups
4. Demonstrations
5. Subscribe to lists

Student Evaluation:

Completion of assignments

Follow-Up Activities:

Open lab, individual use of Internet to locate information for curriculum integration

Suggestions for Replication:

1. Update handouts, list server and transparencies to incorporate informational changes.
2. Instruction can be individualized or given in large or small groups.
3. For active participation, format workshop for 10-20 hours.
4. Allow sufficient time for individualized attention/instruction.

~~ EMAIL ~~

user@mail.dmhs.rockingham.k12.nc.us

DALTON L. McMICHAEL HIGH SCHOOL

ehawkins@mail.dmhs.rockingham.k12.nc.us
ljessup@mail.dmhs.rockingham.k12.nc.us

Introduction

- Most useful/widely accessed Internet resource
- Must be connected to network
- Must have email account

Why Use Email

- Cheaper than mail/telephone
- Convenient
- Fast

Basic Functions

- Send
- Read
- Save
- Delete

EMAIL GUIDELINES

- Check mail regularly, delete unwanted messages.
- Keep messages short, one subject per message.
- Respect copyright and license agreements.
- Messages with all capital letters is same as SHOUTING.
- Be nice, consider tone of message.
- Read before you send.

EMAIL ADDRESSES

- Three parts:
  - user name
  - @sign
  - the address

EX: jdoe@cheese.cracker.org

jones@senate.gov

Curriculum Uses

- Keypals
- Communicate w/experts, peers
- Converse in foreign languages
- Exchange student writings
- Project collaboration
- Listserv

Listserv

- Discussion groups w/common interest
- No charge to participate
- General/subject specific
- Open, Closed, One-Way

NAVIGATION TOOLS

The ***button panel*** provides access to the most commonly-used parts of Pegasus at the click of a button. You can choose between having the button panel as a toolbar, or as a floating window in vertical or horizontal format using the options in *preferences.*

Compose a new message
Read new mail
Open/manage mail folders
Open/manage address books
Open/manage distribution lists
Open the local user list
New mail filtering rules
Use the noticeboard system
Cut selection to the clipboard
Copy selection to clipboard
Paste the contents of the clipboard
Save or write to disk
Retrieve or import from disk
Print
Select font

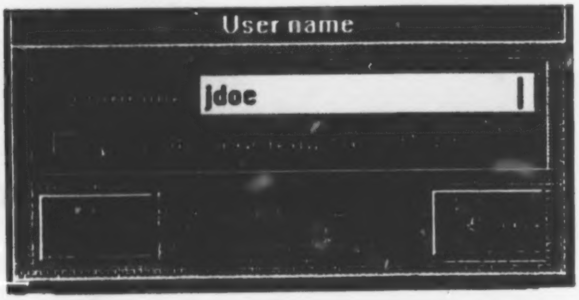
Send all outgoing mail waiting in the mail queue
Check your POP3 host for new mail
Check for new mail and send queued mail in one action

allows you to start a new mail message
allows you to browse your new mail folder
allows you to browse other mail folders
allows you to manage your address books
allows you to manage your distribution lists

PEGASUS MAIL

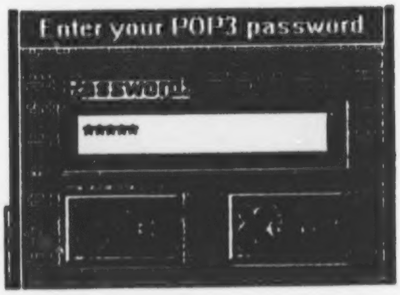
1. *Double click* on the Pegasus icon to start email.

2. Type the first part of your email address here. (EX: jdoe)
   Remember! Email addresses are case sensitive!!!!



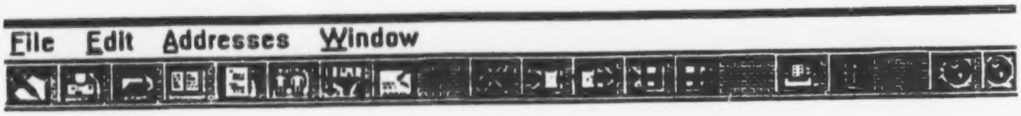
jdoe

3. Type in your password. You will only see a series of asteriks, *not* letters.


Enter your POP3 password
Password:

*****

4. Each icon represents a different option. Refer back to previous page for explanation of each icon.


File
Edit
Addresses
Window

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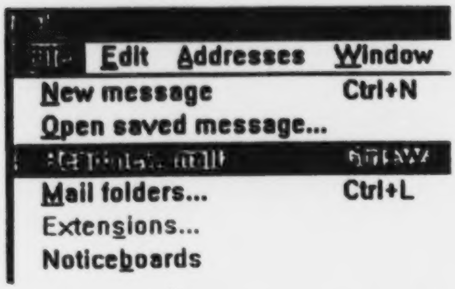
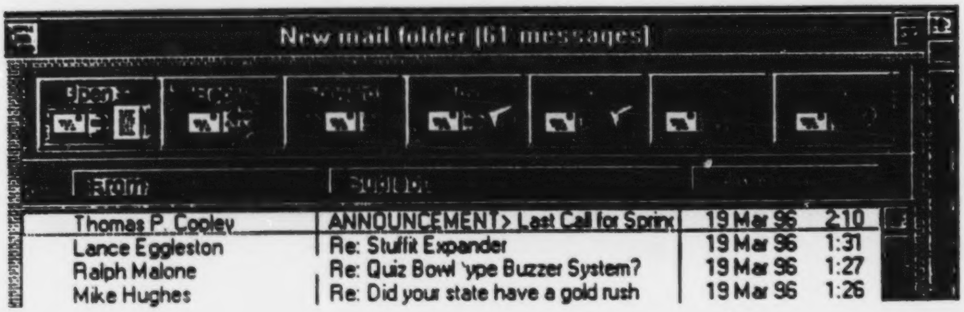
5. To *read mail messages* click two times on the letter envelope or select file, read new mail. (A drop down menu will allow this selection.) Press enter, or double click two times.

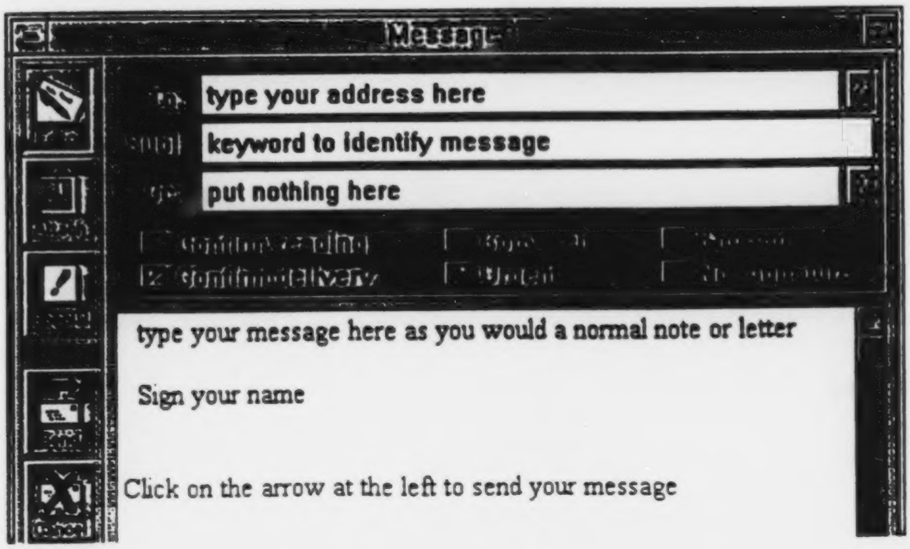

Edit
Addresses
Window
New message
Ctrl+N
Open saved message...
Mail folders...
Ctrl+L
Extensions...
Noticeboards

~ When messages load, highlight desired message to read and *double click* two times. To delete multiple messages hold down the *CTRL KEY, highlight the mesages to delete and press delete.*


New mail folder (61 messages)
From

From	Subject		
Thomas P. Cooley	ANNOUNCEMENT> Last Call for Sprin	19 Mar 96	2:10
Lance Eggleston	Re: Stuffit Expander	19 Mar 96	1:31
Ralph Malone	Re: Quiz Bowl 'ype Buzzer System?	19 Mar 96	1:27
Mike Hughes	Re: Did your state have a gold rush	19 Mar 96	1:26

6. To *send a message d*ouble click on the *pen icon* or select *file, new message* to open the message screen.



type your address here

keyword to identify message

put nothing here

type your message here as you would a normal note or letter

Sign your name

Click on the arrow at the left to send your message

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SET NOMAIL (to temporarily stop mail)

To set nomail, you follow the same procedure you did to SUBSCRIBE with two exceptions:

- In the message space, type SET listserv nomail.

  EX: SET LM_NET nomail

- Omit your name in the message area.

SET MAIL (use this command to begin receiving mail again.)

To set mail, you follow the same procedure you did to SUBSCRIBE with two exceptions:

- In the message space, type Set listserv mail.

  EX: Set LM_NET mail

- Omit your name in the message area.

LISTSERVS

—REMEMBER— Some mailing lists have low rates of traffic, others may be high volume. Hundreds of messages can come into your mailbox each day. Check your mail regularly, print messages you want to keep and delete unwanted messages.

LISTSERVE COMMANDS

SUBSCRIBE (to receive messages)

- Open email to create message.
- In the address line type the listserv address.

EX: LISTSERV@Listserv.syr.edu

- Leave the subject line blank.
- In the message space, type: subscribe (name of listserv without parenthesis) your first name your last name.

EX: Subscribe LM_NET Mary Smith

Shortly after you send your subscription you will receive several messages. The initial messages may include:

- A request for confirmation of your subscription. (Follow directions and reply to the Listserv as requested).
- A brief message containing a series of numbers (Disregard this message).
- A welcome message which includes rules, regulations, procedures of the Listserv. PRINT a copy of this message and keep it for future reference.

UNSUBSCRIBE (to stop mail)

To unsubscribe to a Listserv, you follow the same procedure you did to SUBSCRIBE with two exceptions:

- In the message space, substitute the word UNSUBSCRIBE for SUBSCRIBE,

EX: Unsubscribe LM-NET

- Omit your name in the message area.

EMAIL ASSIGNMENT

DUE DATE: ***March 4, 1996***

1. ***Send*** an email message to: ehawkins@mail.dmhs.rockingham.k12.nc.us

2. ***Save*** to disk two (2) messages received from your listserv.

3. ***Print*** two (2) messages received from your listserv.

4. ***Copy/move*** at least three messages received from your listserv to a ***"folder"***.

5. ***Unsubscribe*** to the listserv you joined on January 22, 1996. (*If you would like to continue receiving mail from the listserv please inform Mrs. Hawkins.*)

—**NOTE:** Item # 1, 4, 5 will be checked using email.

Item # 2, 3 are to be given to Mrs. Hawkins or Mrs. Jessup. (Your disk will be returned to you)

Home | About | Search

TILE.NET/*LISTSERV*

The reference to Internet discussion groups.

- Alphabetical listing by description
- Alphabetical listing by name
- Grouped by host country
- Grouped by sponsoring organization
- Most popular (1000+ members)
- Search by subject

Return to tile.net
For additions, corrections and deletions please see "About".
Last update: November 30, 1995

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Other browsers may reproduce the contents incorrectly.
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Created with TILE

APPENDIX
A

School*Tech*
SCHOOL SITE ADDRESSES - 1996

SCHOOL	PRINCIPAL	LEAD TEACHER	ADDRESS	City/Zip/County	Phone/Fax
Cook Middle School	Joyce Norris	Dick Shaw dshaw@mail.cms.forsyth.k12.nc.us	920 11th St., NW	Winston-Salem 27105-6530 Forsyth County	910/727-2784 Fx: 910/727-8458
Coopers Elementary	Emily Abernethy	Sue Smith nasmith@eastnet.educ.ecu.edu	Rt. 2 Box 209A	Elm City 27822-9433 Nash County	919/937-5612 Fx: 919/937-5648
Glade Creek Elementary	Barry Sturgill	Linnea Miller	Glade Valley Rd., SR 1444	Ennice 28623 Alleghany County	910/657-3388 Fx: 910/657-3435
Grady Brown Elementary	Leonard Mayo '93-96 Patricia Temple '96-	Grace Repass '93-96 grepass@dur.mindspring.com Linda Kubik '96- lkubik@mail.gbes.orange.k12.nc.us	1100 New Grady Brown School Road	Hillsborough 27278-9200 Orange County	919/732-6138 Fx: 919/644-2800
John T. Hoggard High School	Hugh McManus	Ed McCarty n hcss_emc@uncwil.edu	4305 Shipyard Blvd.	Wilmington 28403-6160 New Hanover County	910/350-2072 Fx: 910/350-2066
Lewis Chapel Middle School	Joseph Washington	Mary Swoope	2150 Skibo Road	Fayetteville 28314–0294 Cumberland County	910/864-1407 Fx: 910/864-3498
Dalton McMichael High School	Wayne Tuggle	Ellen Hawkins ehawkins@mail.dmhs.rockingham.k12.nc.us	6845 Hwy. 135	Mayodan 27027-9714 Rockingham County	910/427-5165 Fx: 910/427-5776
New Hope Elementary	Jerry Bostic	Connie Thompson cthomps@mail.nhes.gaston.k12.nc.us	137 Stowe Road	Gastonia 28056-8560 Gaston County	704/824-1617 No Fax
Northside High School	Michael Baker	Lorna Morris lmorris@mail.nhs.beaufort.K12.nc.us	Rt. 1 Box 177	Pinetown 27865-9700 Beaufort County	919/943-6341 Fx: 919/943-6344
Woodfin Elementary	Linda Bradley	Linda Brown lbrown@mail.wes.buncombe.k12.nc.us	108 Elk Mountain Road	Asheville 28804-2012 Buncombe County	704/254-3166 Fx: 704/254-6908

For additional information regarding the SchoolTech Project or the Activities Handbook:

NC Science & Mathematics Alliance
121 W. Jones Street
Raleigh, NC 27603
Phone: 919/733-9159 Fax: 919/733-4857

Robert P. Cullen, *SchoolTech Phase-out Coordinator*
Elizabeth City State University
Department of Biology, Campus Box 930
Elizabeth City, NC 27909
Phone: 919/335-3426 Fax: 919/335-3697

Jennie A. Johnson Franklin, *Activities Handbook Coordinator*
314 W. Franklin Street
Warrenton, NC 27589-1938
Phone: 919/257-3984 Fax: 919/257-2088

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APPENDIX
B

TECHNOLOGY PLAN

Using the premise that our schools must undergo some fundamental changes in order to successfully prepare students for a technology rich society , we have developed a detailed plan that addresses the appropriate changes. We feel that these changes must occur in the classroom (the end of the delivery system for education). The changes must deal with solutions to the problems that impede learning. In order to find solutions to these problems, we must first identify them.

The problems that most schools are currently dealing with include:

- **poor social skills**
- **dysfunctional families**
- **emotional handicaps**
- **varied learning styles**
- **varied learning speeds**
- **a wide range of mental abilities**
- **lack of motivation**
- **disinterest**

Having identified the problems, we must now look at solutions.

We think that restructuring the classroom is a step toward solving these problems. This restructuring should provide each classroom with the appropriate tools and materials so that students can develop successful learning habits that fit their innate styles, rates and abilities.
We do not think this can be done with the usual whole-class activities where every student listens to a lecture or does the same activity. We think that the classroom must become a place that offers a variety of tasks and activities. These include:

- **Research centers**
- **Resource centers**
- **Data collection centers**
- **Data processing centers**
- **Reading and writing centers**
- **Modeling activities**
- **Simulations and animations**
- **Access to the outside world**
- **Enrichment activities**

Each of these centers and activities should be hands-on for the students and must be located in the classroom.

In order to provide this type of learning environment, each classroom must be equipped with the appropriate technology and materials. We propose the following:

- **A school-wide cabling system to allow distributive networks of up to six computers in each classroom with multimedia transmission capability and control.**
- **CD ROM Software appropriate for each classroom.**
- **A networked teacher workstation in each classroom.**
- **Appropriate networkable software that allows students to access and create simulations, models, animations, electronic presentations and interactive lessons.**
- **Access to laserdisk technology for enrichment, research and resource.**
- **Access to the Internet and E-mail to communicate and experience the outside world.**
- **Multimedia presentation hardware and software.**
- **Printers to produce hard copy.**
- **Desktop publishing centers.**

In order to make the technology functional, an ongoing training program for teachers must be part of this plan. Due to the constant and rapid changes that occur in the technology field, teachers must be kept up to date and new teachers trained.

We have found that in-school support is essential when a large amount of technology is being used in classrooms and labs. There are so many nuances and quirks associated with technology that no teacher is able to keep up with them. This is another functionality issue that we feel is vital at a technology magnet school.

If a school is to undergo this type of restructuring, we feel that several additional issues must be addressed. We do not feel that we can rely on "grants" etc. to provide a reliable, steady source of funding. We must ask the school system to make a commitment to provide adequate funding if we are to be successful. What do we consider adequate funding? We are looking at a five year plan of implementation. To provide a realistic timetable for implementing the plan, we must have funds for the following:

Once this 5 year plan has been implemented, an ongoing commitment of funds must become part of the school budget so that new and innovative programs continue to be an integral part of the learning environment.

We feel that the old paradigm of "Use it up. Wear it out. Make do. Do without." is no longer appropriate thinking for schools. Even in times of recession and tight money, the best possible education for all of our children must be a top priority.

THE MULTITASKING CLASSROOM

by Dick Shaw, Technology Specialist, Cook Middle School

Rationale:

The typical heterogeneous classroom consists of students who possess varied learning styles, speeds and abilities. A teacher cannot successfully deal with all of these styles and abilities using traditional whole-class activities and teacher centered delivery. There must be a variety of activities (tasks) available that allow every student to learn using the learning style that best suits their individual needs.

The tasks that are available for students should include modeling, simulation, hands-on activities, data collection, data analysis, research, enrichment, presentation opportunities, drill and practice, tutoring and group interaction.

The problems created in the preceding paragraphs can be addressed by building a variety of centers in a classroom. These centers should provide areas where students can perform those tasks most suited to their learning styles.

To create the tasking centers, a variety of tools must be used. These include the following:

1. Materials for lab activities
2. Materials for modeling
3. Books for research and enrichment
4. Computers and software that provide interactive activities
5. CD ROM players for accessing multimedia research and enrichment software
6. Laserdisk players and disks for enrichment, enhancement and research
7. Presentation software
8. Data analysis software
9. Interfacing hardware and software for data acquisition
10. Simulation software (animations)
11. Digitizing and scanning hardware
12. Access to the Internet with full motion video and sound
13. Large screen monitors for group presentations
14. Video cameras for digitizing
15. Printers for hard copy
16. Schoolwide cabling for networking

The tools that are used should be as varied as the learning styles of the students and the creativity of the of the teacher. Only when the classroom becomes inviting and interesting enough to allow students to forget their emotional and social problems can the classroom be a successful learning center.

This year we (Cook Middle School) are emphasizing the use of multimedia workstations in the classroom. These are fast computers (Pentium, 100mghz PCs) or (Macintosh AVs) with internal CD ROM drives. They allow students and teachers to access on-screen video, sound and telecommunications. These computers are networked with Ethernet, giving each access to the following:

1. Internet
2. Catalog Plus
3. Rediscover Science and Math
4. Microsoft Works
5. CD-ROM (Microsoft Bookshelf, Encarta, Groliers Multimedia Encyclopedia, varied course specific disks)

TYPES OF ACTIVITIES

1. **Research** using reference material from the Media Center, the Internet, local government documents, laserdisks, computer software.
2. **Enrichment** using simulation software, laserdisks, multimedia software and printed material.
3. **Hands-on activities** that have relevance to the topic.
4. **Art activities** that utilize the creative talents of students.
5. **Data collection and manipulation** using data bases.
6. **Data analysis** using spreadsheets.
7. **Model building** to utilize manipulative and problem solving skills.
8. **Problem solving activities** that utilize newly acquired information.
9. **Drill and practice** to reinforce and entrench needed skills that will be used over and over again.
10. **Relevance activities** that show how the newly acquired skills and information are used in real-world situations.
11. **Assessment activities** that identify strengths and weaknesses in acquired skills and knowledge.
12. **Remedial activities** that address weak areas in learning skills.

A TYPICAL MULTITASKING UNIT
(North Carolina Stuff)

The following activities are required for each team:

1. Make a model of the topography of North Carolina.
    - A. Color code and label each geographic region.
    - B. Identify the location of its major cities using latitude and longitude.
    - C. Draw and label the location of its major rivers.
    - D. (Extra credit: Outline and label the 100 counties.)
2. Create a database of the reptiles and amphibians that live in North Carolina.
    - A. Include pictures of each type.
    - B. Describe the habitat of each.
    - C. Show the relative sizes of each.
    - D. Identify all of the poisonous reptiles that live in our region of the state.
    - E. (Extra credit: Identify any animals that are endangered.)
3. Prepare a presentation that shows the history of one of the following:
    - A. The Algonquins
    - B. The Lost Colony
    - C. The Cherokee
    - D. The Moravians
    - E. The African Americans
    - F. The Lumbee
4. Complete the activities that require the use of the N.C. Database on Counties.
5. Use databases downloaded from The Internet to illustrate graphically the average temperature and rainfall for each season for the last 100 years in North Carolina.
6. Keep a log book of what your team accomplishes each day.

The following activities are required for each individual; you must select at least 3:

1. Write a research paper that describes the structure and function of our city county and state governments.
2. Perform the Technological Dissection of the Frog as a typical representative of amphibians along with taking the associated tests.
3. Prepare a spreadsheet that uses population databases to illustrate the population growth of N.C. during the past 200 years.

4. On a map of North Carolina, use some type of legend to illustrate the current population distribution.
5. Using a population database, calculate the expected growth rate for the next 100 years in North Carolina. Illustrate this growth graphically.

Your group must pick 4 activities from the following list.

1. Create an electronic presentation using Hyperstudio on one of the following:
    - A. Minerals in North Carolina
    - B. North Carolina's greatest cities.
    - C. North Carolina Mammals.
2. Research the pros and cons of cigarette smoking and the impact that tobacco has on the economy of North Carolina along with the effect that a smoking ban would have on the state.
3. What chemical processes are involved in producing textiles and what by-products are created during these processes. What disposal methods are used on the by-products? Show the equations that represent these reactions and illustrate the molecular structure of each product and by-product.
4. Diagram the major connecting highways between 20 of the major cities of North Carolina showing the distances between each city and the type of road that exists.

    Contact the State Department of Transportation and secure a database on highway usage to illustrate the amount of traffic and the location of traffic accidents on each road.

    Calculate the frequency of accidents compared to number of automobiles, and number of miles.

    Calculate the cost of travel to each city from Winston-Salem using the current gasoline price for regular gas.
5. Describe and illustrate the formation of, and the movement of, the barrier islands along the coast of North Carolina with predictions as to where these islands will be located in 20, 50,100 and 1000 years.
6. Do the activity "A Visual Investigation of the Weather"* and describe the types of weather that typically occurs each season in North Carolina and the most frequent directions these weather patterns move.

*This activity is located in the activity section of this document.

APPENDIX
C

RESOURCE ADDRESSES

The Eisenhower National Clearinghouse for Mathematics and Science Education

ENC is located at Ohio State University and funded through a contract with the U.S. Department of Education's Office of Educational Research and Improvement. **ENC** offers **K-12** teachers and others **free** information about mathematics and science curriculum resources through the Internet or toll-free modem access to **ENC On-line**, in print, through a variety of publications, and on CD-ROM.

To access **ENC** on the World Wide Web, use the address

http://www.enc.org

To access **ENC** on Telnet, use the address **enc.org** (log in using the word "guest").

If you wish to write ENC, their address is:

Eisenhower National Clearinghouse
The Ohio State University
1929 Kenny Road
Columbus, Ohio 43210-1079

Government E-mail Addresses

Here is a list of E-mail addresses that may interest you or your students.

North Carolina Representatives to Congress:

NC 2nd Funderburk, David (R)	funnc02@hr.house.gov
NC 4th Heineman, Frederick (R)	thechief@hr.house.gov
NC 5th Burr, Richard (R)	mail2nc5@hr.house.gov
NC 7th Rose, Charlie (D)	crose@hr.house.gov
NC 9th Myrick, Sue (R)	myrick@hr.house.gov
NC 10th Ballenger, Cass (R)	cassmail@hr.house.gov
NC 11th Taylor, Charles (R)	chtaylor@hr.house.gov
NC 12th Watt, Mel (D)	melmail@hr.house.gov

North Carolina Senators:

NC Faircloth, Lauch (R)	senator@faircloth.senate.gov
NC Helms, Jesse (R)	jesse_helms@helms.senate.gov

E-Mail Addresses of U. S. Senators

CENSORED

Free Speech Online
Blue Ribbon Campaign

"The information superhighway is a revolution that in years to come will transcend newspapers, radio, and television as an information source. Therefore, I think this is the time to put some restrictions on it." - James Exon (D - NE)

- AK Murkowski, Frank (R) email@murkowski.senate.gov
- AK Stevens, Ted (R) senator_stevens@stevens.senate.gov

- AL Shelby, Richard (R) senator@shelby.senate.gov

- AR Bumpers, Dale (D) senator@bumpers.senate.gov

- AZ Kyl, Jon (R) info@kyl.senate.gov
- AZ McCain, John (R) senator_mccain@mccain.senate.gov

- CA Boxer, Barbara (D) senator@boxer.senate.gov
- CA Feinstein, Dianne (D) senator@feinstein.senate.gov

- CO Brown, Hank (R) senator_brown@brown.senate.gov
- CO Campbell, Ben N. (R) data@nighthorse.falcontech.com

- CT Dodd, Christopher (D) sen_dodd@dodd.senate.gov
- CT Lieberman, Joseph (D) senator_lieberman@lieberman.senate.gov

- DE Biden, Joe (D) senator@biden.senate.gov

- FL Graham, Bob (D) bob_graham@senate.gov
- FL Mack, Connie (R) senator_mack@jec.senate.gov

- GA Coverdell, Paul (R) senator_coverdell@coverdell.senate.gov

- IA Grassley, Chuck (R) chuck_grassley@grassley.senate.gov

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- IA Harkin, Tom (D) tom_harkin@harkin.senate.gov

- ID Craig, Larry (R) larry_craig@craig.senate.gov
- ID Kempthorne, Dirk (R) dirk_kempthorne@kempthorne.senate.gov

- IL Moseley-Braun, Carol (D) senator@moseley-braun.senate.gov
- IL Simon, Paul (D) senator@simon.senate.gov

- IN Lugar, Richard (R) lugar@iquest.net

- KY Ford, Wendell (D) wendell_ford@ford.senate.gov
- KY McConnell, Mitch (R) senator@mcconnell.senate.gov

- LA Breaux, John (D) senator@breaux.senate.gov
- LA Johnston, Bennett (D) senator@johnston.senate.gov

- MA Kennedy, Ted (D) senator@kennedy.senate.gov
- MA Kerry, John (D) john_kerry@kerry.senate.gov

- MD Mikulski, Barbara (D) senator@mikulski.senate.gov
- MD Sarbanes, Paul (D) senator@sarbanes.senate.gov

- ME Cohen, Bill (R) billcohen@cohen.senate.gov

- MI Abraham, Spencer (R) michigan@abraham.senate.gov
- MI Levin, Carl (D) senator@levin.senate.gov

- MN Grams, Rod (R) mail_grams@grams.senate.gov
- MN Wellstone, Paul (D) senator@wellstone.senate.gov

- MO Ashcroft, John (R) john_ashcroft@ashcroft.senate.gov

- MS Cochran, Thad (R) senator@cochran.senate.gov

- MT Baucus, Max (D) max@baucus.senate.gov
- MT Burns, Conrad (R) conrad_burns@burns.senate.gov

- NC Faircloth, Lauch (R) senator@faircloth.senate.gov
- NC Helms, Jesse (R) jesse_helms@helms.senate.gov

- ND Dorgan, Byron (D) senator@dorgan.senate.gov

- NE Kerrey, Bob (D) bob@kerrey.senate.gov

- NH Gregg, Judd (R) mailbox@gregg.senate.gov
- NH Smith, Bob (R) opinion@smith.senate.gov

- NJ Bradley, Bill (D) senator@bradley.senate.gov

- NM Bingaman, Jeff (D) senator_bingaman@bingaman.senate.gov
- NM Domenici, Pete (R) senator_domenici@domenici.senate.gov

- NV Reid, Harry (D) senator_reid@reid.senate.gov

- NY D'Aamato, Alfonse (R) senator_al@damato.senate.gov
- NY Moynihan, Daniel P (D) senator@dpm.senate.gov

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- OH DeWine, Michael (R) senator_dewine@dewine.senate.gov
- OH Glenn, John (D) caroline@cua3.csuohio.edu

- OK Nickles, Don (R) senator@nickles.senate.gov

- OR Wyden, Ron (D) wyden@teleport.com

- PA Santorum, Rick (R) senator@santorum.senate.gov
- PA Specter, Arlen (R) senator_specter@specter.senate.gov

- RI Chafee, John (R) senator_chafee@chafee.senate.gov

- SC Hollings, Ernest (D) senator@hollings.senate.gov
- SC Thurmond, Strom (R) senator@thurmond.senate.gov

- SD Daschle, Thomas (D) tom_daschle@daschle.senate.gov
- SD Pressler, Larry (R) larry_pressler@pressler.senate.gov

- TN Frist, Bill (R) senator_frist@frist.senate.gov
- TN Thompson, Fred (R) senator_thompson@thompson.senate.gov

- TX Gramm, Phil (R) info@gramm96.org
- TX Hutchison, Kay (R) senator@hutchison.senate.gov

- UT Bennett, Robert (R) senator@bennett.senate.gov
- UT Hatch, Orrin (R) senator_hatch@hatch.senate.gov

- VA Robb, Charles (D) senator@robb.senate.gov
- VA Warner, John (R) senator@warner.senate.gov

- VT Jeffords, James (R) vermont@jeffords.senate.gov
- VT Leahy, Patrick (D) senator_leahy@leahy.senate.gov

- WA Gorton, Slade (R) senator_gorton@gorton.senate.gov
- WA Murray, Patty (D) senator_murray@murray.senate.gov

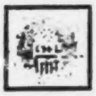
- WI Feingold, Russell (D) senator@feingold.senate.gov
- WI Kohl, Herb (D) senator_kohl@kohl.senate.gov

- WV Rockefeller, Jay (D) senator@rockefeller.senate.gov

- WY Simpson, Alan (R) senator@simpson.senate.gov

- Special Committee on Aging mailbox@aging.senate.gov

- Committee on Small Business small-bus.senate.gov


Congressional E-Mail Addresse

Free Speech Online
Blue Ribbon Campaign Join the Blue Ribbon Anti-Censorship Campaign!

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COOK MIDDLE SCHOOL WWW SITES AND LOCATIONS

DIRECTORIES

PLANET EARTH HOME PAGE VIRTUAL LIBRARY
http://godric.nosc.mil/planet_earth/library.html

YAHOO
http://www.yahoo.com

EDUCATIONAL SITES

Cook Middle School
http://MAIL.CMS.FORSYTH.K12.NC.US

Classroom Resources
http://informns.k12.mn.us:80/~eroberts/pca/*class.htmL

Kids Web - A World Wide Web Digital Library for Schoolkids
http://www.infomall.org:80/kidsweb/

Macintosh Educators Page
http://www.infonet.net/showcase/macintosh/#Science

Socioeconomic Data and Applications Center - Home Page
http://www.ciesin.org/SEDAC/SEDAC-home.html

UC Berkeley Home Page
http://www.berkeley.edu/

Welcome to PBS
http://www.pbs.org/

Xerox PARC Map Viewer
http://pubweb.parc.xerox.com/map/proj=rect

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SCIENCE

CHEMISTRY

Chemist's Art Gallery
http://www.csc.fi/lul/chem/graphics.html

Chemistry Teaching Resources on the Internet
http://www.anachem.umu.se/eks/pointers.htm

Nucleic acid models
http://ndbserver.rutgers.edu/ndb/atlas/index.html

Poly-Link -- Knowlege Bank
http://www.polymers.com/polylink/subs/knoban.html

Poly-Links - Plastics and Polymers Web Server
http://www.polymers.com/

The NIH Molecular Modeling Home Page
http://www.nih.gov/molecular_modeling/mmhome.html

GEOLOGY

Access to the current seismicity
http://quake.wr.usgs.gov/QUAKES/CURRENT/current.html

Ask-A-Geologist
http://walrus.wr.usgs.gov/docs/ask-a-ge.html

Earthquake Info from the U.S.G.S. in Menlo Park, CA
http://quake.wr.usgs.gov/

Browse Minerals
http://pong.igpp.ucla.edu/pet/browse.html

0quake
gopher://gldfs.cr.usgs.gov:79/0quake

Index of gifs

http://www.zoo.latrobe.edu.au/gifs/

Math and Science Projects on the Internet

http://info.ckp.edu/publications/presentations/talk1.html

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NASA SITES

NASA K-12 Internet Initiative
http://quest.arc.nasa.gov/

National Geophysical Data Center
http://www.ngdc.noaa.gov/ngdc.html

NCDC Interactive Visualization of Climate Data
http://www.ncdc.noaa.gov/homepg/interprod.html

NGDC/WDC A for MGG - Global Relief Data
http://www.ngdc.noaa.gov:80/mgg/global/global.html

NOAA Home Page
http://www.noaa.gov/

Spacelink: ExInEd PictureBooks
http://spacelink.msfc.nasa.gov:80/Instructional.Materials/Software/Macintosh/ExInEd.PictureBooks/

Space Movie Archive
http://www.univ-rennes1.fr/ASTRO/anim-e.html

The NASA/JPL Imaging Radar Home Page
http://southport.jpl.nasa.gov/

SMITHSONIAN

gopher://sunsite.unc.edu/11/../.pub/multimedia/pictures/smithsonian

SEAWORLD

http://www.bev.net:80/education/SeaWorld/

The Science Lab

http://bruin.bethel.hampton.k12.va.us/science.html

TOXIC WASTE

http://sunsite.unc.edu/nc/nc_env_handbook/waste.html

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SOCIAL STUDIES

ulaw(Folk Songs)
gopher://gopher.VOA.GOV:70/11/audio/ulaw

Newswire
gopher://gopher.voa.gov/11%2Fnewswire

World Wide Web Servers: NC Sensitive Map
http://www2.persimmon.com/maps/nc/ncmap.html

PLANET EARTH HOME PAGE - WORLD REGION 2
http://www.nosc.mil/planet_earth/world_2.html#wrb13

"The White Man's Burden" and Its Critics
http://web.syr.edu/~fjzwick/kipling/whiteman.html

The American Revolution and the struggle for Independence
http://grid.let.rug.nl/~welling/usa/revolution.html

CERN/ANU - Asian Studies WWW VL
http://coombs.anu.edu.au/WWWVL-AsianStudies.html

China Home Page
http://utkvx1.utk.edu/~xurs/china.html

Indonesian Home Page at Jakarta
http://mawar.inn.bppt.go.id/index.html

Information on India
http://spiderman.bu.edu/misc/india/

Japan - WWW Virtual Library
http://fuji.stanford.edu/VL/WWW-VL-Japan.html

Maya Sites - Science Museum of Minnesota
http://www.ties.k12.mn.us:80/~smm/sites.html#topicci

WEATHER

EarthWatch Communications, Inc.
http://www.earthwatch.com/hurricane10.html

NCSU METEOROLOGY
http://meawx1.nrrc.ncsu.edu/

Purdue Weather Processor
http://thunder.atms.purdue.edu/

radar.gif
http://www.tasc.com/icast/weather/atl/radar.gif

The Weather Channel ® Home Page
http://www.weather.com/

WeatherNet
http://cirrus.sprl.umich.edu/wxnet/

COOPERS ELEMENTARY
Five Favorite Sites to Visit on the Internet

http://www.whitehouse.gov

http://www.unc.edu

http://www.exploratorium.edu

http://www.cs.yale.edu/HTML/YALE/CS/HyPlans/loosemore-sandra/froggy.html

http://www.usc.edu/dept/v-lib/anthropology.html

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```
# Human:
# Okay:
# Host:
#
# alias site-name       dotted.reflector.ip.address     s       r
#----------------------------------------------------------------------
#                                                                     #
#                  T h e   R e f l e c t o r s                        #
#                                                                     #
#----------------------------------------------------------------------
# Title: Murdoch University
# Where: Australia
# Info:  Keep your cap (bandwidth) at 80kbps max.  By appointment.
# WWW:   http://134.115.224.48/
# Human: Geoff Rehn <rehn@cleo.murdoch.edu.au>
# Okay:  94-09-12, rehn
# Host:  cleo.murdoch.edu.au
#
alias   (Australia) Murdoch Univ.        134.115.224.60  s       r
#----------------------------------------------------------------------
# Title: The University of Melbourne
# Where: Melbourne, Australia
# Info:  Casual use welcome at 80kbps max. Conferences by appointment.
# WWW:   http://www.unimelb.edu.au/
# Human: Martin Gleeson <gleeson@unimelb.edu.au>
# Okay:  12 Dec 94, gleeson
# Host:  reflector.unimelb.edu.au
#
alias   (Australia) Univ of Melbourne    128.250.20.187  s       r
#----------------------------------------------------------------------
# Title: AI-Lab Vrije Universiteit Brussel, Belgium
# Where: Brussels, Belgium
# Info:  Receive only when asked, please. The reflector's primary
#         use is the transmission of seminars and live scientific
#        experiments.
# WWW:   http://arti.vub.ac.be/welcome.html
# Human: Peter Stuer <peterst@arti.vub.ac.be>
# Okay:  9 Nov 1994
# Host:  arti.vub.ac.be
#
alias   (Belgium) Vrije Univ. AI-Lab     134.184.26.10   s       r
#----------------------------------------------------------------------
# Title: University of Sao Paulo
# Where: Sao Paulo, Brazil
# Info:
# WWW:
# Human:
# Host:  suncisc.cisc.sc.usp.br
#
alias   (Brazil) Univ. Sao Paulo         143.107.225.6   s       r
#----------------------------------------------------------------------
# Title: Dept of Communication Studies, Faculty of Humanities &
#        Computer Center, University of Vaasa
# Where: Vaasa, Finland
# Info:  Try day and evening (Finnish time +2 GMT)
# WWW:   http://www.uwasa.fi/
# Human: Tuomas Eerola <te@uwasa.fi>
# Okay:  94-11-01, Anita
# Host:  zippo.uwasa.fi
#
alias   (Finland) Univ. Vaasa    193.166.120.3   s       r
```

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```
#-----------------------------------------------------------------
# Title: Rotterdam School of Mgmt
# Where: Rotterdam, Holland
# Human: Wetering, drs. M.W. van <MWETERING@fac.fbk.eur.nl>
# Host:  reflector.fbk.eur.nl
#
alias  (Holland) Rotterdam Mgmt.      130.115.150.2   s      r
#-----------------------------------------------------------------
# Title: Interactive Systems Centre, Magee College, Univ. of Ulster
# Where: Northern Ireland
# Info:  Please cap transmissions to 30 kbs.
# WWW:   http://www.iscm.ulst.ac.uk/
# Human: Mike McCool <mike@iscm.ulst.ac.uk>
# Host:  claudia.iscm.ulst.ac.uk
#
alias  (Ireland) Univ. Ulster  193.63.68.162   s      r
#-----------------------------------------------------------------
# Title: Weizmann Institute of Science - Computing Center
# Where: Rehovot, Israel
# Info:
# WWW:
# Human:
# Host:  sunten.weizmann.ac.il
#
alias  (Israel) Weizmann Inst. 132.76.64.143   s      r
#-----------------------------------------------------------------
# Title: Eurocube I.Net
# Where: Italy
# Info:  Keep your cap (bandwidth) at 30kbps max.
# WWW:   http://www.eurocube.it/video/
# Human: Guido Tripaldi Shamblin <guido@eurocube.it>
# Okay:  95-02-11, Guido
# Host:  reflector.eurocube.it
#
alias  (Italy) Eurocube        194.20.44.111   s      r
#-----------------------------------------------------------------
# Title: Reflector of the Tuscany Metropolitan Area Network
# Where: Pisa, Italy
# Info:  It's a Tuscany DQDB fiber optic network connecting Pisa,
#        Firenze and Siena.  In cooperation with SERRA (SERvizi Rete
#        Ateneo (network university services of Pisa).
# WWW:
# Human: Stefano Giordano <stefano@iet.unipi.it>,
#        Giacomo Guarguaglini <guargua@radar.iet.unipi.it>
# Okay:  94-10-09, guargua
# Host:  indy.iet.unipi.it
#
alias  (Italy) Univ. Pisa      131.114.9.19    s      r
#-----------------------------------------------------------------
# Title: Eccosys, Ltd.    .
# Where: Tomigaya, Shibuya, Tokyo, Japan
# Info:  (Check out the Eccosys dolphin logo - Michael)
# WWW:   http://www.eccosys.com/PEOPLE/JITO/joi.html
# Human: Joichi Ito <jito@eccosys.com>
# Okay:  Fri, 21 Oct 1994, Joichi
# Host:  neoteny.eccosys.com
#
alias  (Japan) Eccosys 199.100.7.5      s      r
#-----------------------------------------------------------------
# Title: Future Pirates Broadcast Reflector
# Where: Japan
```

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```
# Info:
# WWW:   http://www.fpi.jp/Welcome.html
# Human:
# Host:  bass.fpi.co.jp
#
alias   (Japan) Future Pirates  202.32.26.17    s       r
#-----------------------------------------------------------------
# Title: Department of Applied Molecular Science,
#        Institute for Molecular Science,
#        Okazaki National Research Institutes.
# Where: Myodaiji, Okazaki 444, Japan
# Info:  Japanese Standard Time = GMT + 0900
# WWW:   http://solaris.ims.ac.jp/videoconf.html
# Human: Jiro Toyoda <toyoda@solaris.ims.ac.jp>
# Okay:  94-12-01, toyoda
# Host:  solaris.ims.ac.jp
#
alias   (Japan) Okazaki NRI     133.48.144.60   s       r
#-----------------------------------------------------------------
# Title: Research into Artifact Center for Engineering, the
#        University of Tokyo
# Where: Tokyo, Japan
# Info:
# WWW:   http://www.race.u-tokyo.ac.jp/
# Human: Koji Ando <chutzpah@race.u-tokyo.ac.jp>
# Okay:  94-10-09, koji-san
# Host:  race-server.race.u-tokyo.ac.jp
#
alias   (Japan) Univ. Tokyo     157.82.76.2     s       r
#-----------------------------------------------------------------
# Title: Cognitive Science Department, Katholic University of Nijmegen (KUN).
# Where: The Netherlands.  (Known as Holland to Americans.)
# Info:  Restrain yourselve in bandwith, use talk if possible.
# WWW:   http://kunpu7.psych.kun.nl/cogw/nici-cogsci.html
# Human: De Haan <dehaan@nici.kun.nl>, http://dehaan1.psych.kun.nl/
# Okay:  1995-3-13, dehaan
# Host:  kunpu7.psych.kun.nl
alias   (Netherlands) Nijmegen Univ.    131.174.200.28  s       r
#-----------------------------------------------------------------
# Title: Ostfold Regional College / Informatics Department
# Where: Halden, Norway
# Info:  At end of 256K line; max bandwidth at 40Kbps.  NASA Select.
# WWW:   http://www.ludvigsen.hiof.no/webdoc/video.html
# Human: Barre Ludvigsen <borrel@dhhalden.no>, Jon Kalnes <jonk@dhhalden.no>
# Okay:  94-10-29, barre
# Host:  fenris.dhhalden.no
#
alias   (Norway) Ostfold/Fenris 158.36.33.3     s       r
#
# Info:  Recieve only.
# Host:  158.36.33.5
#
alias   (Norway) Ostfold/Kark   158.36.33.5     n       r
#-----------------------------------------------------------------
# Title: University of Trondheim, Norway
# Where: Department of informatics
# Info:  Local daytime and evenings
# WWW:   http //www.ifi.unit.no/
# Human: eyvind.hope@ifi.unit.no
# Okay:  94-11-27 eyvind.hope@ifi.unit.no
# Host:  venus.ifi.unit.no
```

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```
#
alias   (Norway) Univ. Trondheim        129.241.161.225 s       r
#---------------------------------------------------------------------
# Title: University of Lisbon / Faculty of Sciences
# Where: Lisbon, Portugal
# Info:  Maintained by the Department of Informatics.
# WWW:   http://www.fc.ul.pt
# Human: cap@di.fc.ul.pt, frazao@di.fc.ul.pt
# Host:  master.di.fc.ul.pt
#
alias   (Portugal) Univ. Lisbon 192.67.76.40    s       r
#---------------------------------------------------------------------
# Title: National University of Singapore
# Human: K C Lun <coflunkc@leonis.nus.sg>, Tan Tin Wee <bchtantw@leonis.nus.sg>
# Host:  biomed.nus.sg
#
alias   (Singapore) Univ. Singapore     137.132.9.61    s       r
#---------------------------------------------------------------------
# Title: Lund University Computing Center
# Where: Lund, Sweden
# Info:
# WWW:   http://www.lu.se/
# Human: Jan Engvald <Jan.Engvald@ldc.lu.se>
# Host:  reflector.lu.se
# Okay:  94-11-4, Jan
#
alias   (Sweden) Lund University        130.235.128.100 s       r
#---------------------------------------------------------------------
# Title: Lund University Computing Center's NASA Select feed
# Where: Lund, Sweden
# Info:  NASA Select.
# WWW:   http://www.lu.se/
# Human: Jan Engvald <Jan.Engvald@ldc.lu.se>
# Host:  reflector.lu.se
# Okay:  94-11-4, Jan
#
alias   (Sweden) NASA Select    130.235.128.100 n       r
#---------------------------------------------------------------------
# Title: Centre Universitaire d'Informatique
# Where: Geneva, Switzerland, GMT+1
# Info:  Maximum participants: 10
# WWW:   http://cui_www.unige.ch/db-research/Members/mb/mb.html
# Human: Michel Bonjour <bonjour@cui.unige.ch>
# Okay:  95-01-15, Michel
# Host:  cuisunf.unige.ch
#
alias   (Switzerland) Geneva Univ.      129.194.12.26   s       r
#---------------------------------------------------------------------
# Title: INFORGE/University of Lausanne
# Where: Lausanne, Vaud, Switzerland
# Info:
# WWW:
# Human: mas@ulinf0.unil.ch
# Host:  ulinf0.unil.ch
#
alias   (Switzerland) Univ. Lausanne    130.223.91.2    s       r
#---------------------------------------------------------------------
# Title: The Open University
# Where:
# Info:
# WWW:
```

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```
# Human:
# Host:  freud.open.ac.uk
#
alias   (UK) Open Univ. 137.108.81.14   s       r
#----------------------------------------------------------------------
# Title: Hallam Trial Reflector
# Where: Sheffield Hallam University, United Kingdom
# Info:  Short-term initially
# WWW:   http://pine.shu.ac.uk/
# Human: Chuck Elliot <cmsce@teak.shu.ac.uk
# Okay:  10-26-94, Chuck
# Host:  kingfisher.cms.shu.ac.uk
#
alias   (UK) Univ. Hallam       143.52.51.15    s       r
#----------------------------------------------------------------------
# Title: Carnegie Mellon Univ. (CMU), ARPA Speech Group, School of C.S.
# Where: Pittsburgh, Pennsylvania, USA
# Info:  http://www.cs.cmu.edu:8001/Web/SCS-HOME.html
# WWW:
# Human: "Eric H. Thayer" <eht+@cs.cmu.edu>
# Okay:  94-09-08, eht+
# Host:  cutter.speech.cs.cmu.edu
#
alias   (USA) CMU ARPA Speech   128.2.206.223   s       r
#----------------------------------------------------------------------
# Title: Carnegie Mellon Univ. (CMU), Grad School Industrial Admin.
# Where:
# Info:  Carries NASA Select.
# WWW:
# Human: jds@kudzu.cnidr.org
# Host:  www.gsia.cmu.edu
#
alias   (USA) CMU GSIA  128.2.230.10    s       r
#----------------------------------------------------------------------
# Title: Clearinghouse for Networked Information Discovery and Retrieval
# Where: Research Triangle Park, North Carolina, USA
# Info:  Don't send still screen shots.
# WWW:   http://kudze.cnidr.org/
# Human: Laura M. Craighead <lmc@cnidr.org>
# Okay:  94-09-08, lmc
# Host:  hilda.ncsc.org
#
alias   (USA) C.N.I.D.R.        128.109.178.103 s       r
#----------------------------------------------------------------------
# Title: Cornell University Public Reflector
# Where: Ithaca, New York, USA
# Info:  >80 kbps will get you disconnected for ten minutes.  Often
#        very busy--please don't stay on long via modem.
# WWW:
# Human: Dick Cogger<r.cogger@cornell.edu> or
#        John Lynn <jal7@cornell.edu>
# Host:  pro60-test2.cit.cornell.edu
#
alias   (USA) Cornell Univ.     132.236.91.204  s       r
#----------------------------------------------------------------------
# Title: The Eden Reflector
# Where: Austin, Tx.
# Info:  Mostly for viewing events we show. Feel free to use anytime.
# WWW:   http://www.eden.com
# Human: jher@eden.com
# Host:  matrix.eden.com
```

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```
# Okay:  Wed 14 Sep 1994, jher@eden.com
#
alias   (USA) Eden       199.171.21.1     s       r
#-----------------------------------------------------------------
# Title: GTE Laboratories, Inc., Computer & Intelligent Systems Lab
# Where: Waltham, Massachusetts, USA
# Info:  Please keep bit rates low (30 kbps or less)
# Human: John Nicol <nicol@gte.com>, 617.466.4229, 617.466.2060 fax
# Host:  albion.gte.com
#
alias   (USA) GTE-albion        132.197.9.105   s       r
#-----------------------------------------------------------------
# Title: GTE Laboratories, Inc., Advanced Local Area Network Testbed
# Where: Waltham, Massachusetts, USA
# Info:  Please keep bit rates low (40 kbps or less), soon to operate
#        on a Fast Ethernet and ATM network.
# WWW:   http://www-lanlab.gte.com/
# Human: Alan Bugos <abugos@gte.com>, 617.466.2698
# Okay:  94-12-05, abugos
# Host:  skyhawk.gte.com
#
alias   (USA) GTE-skyhawk       132.197.70.1     s       r
#-----------------------------------------------------------------
# Title: Intelecom Data Systems (IDS) World Network Public Reflector
# Where: East Greenwich, Rhode Island, USA
# Info:  Standard bandwidth restrictions apply for inbound
#        users, IDS customers and IDS InterCable Net customers can
#        boost it up as high as they want.
# WWW:   http://www.ids.net/
# Human: Andy Green <green@ids.net>
# Okay:  950103, Andy Green <green@ids.net>
# Host:  reflector.ids.net
#
alias   (USA) Intelecom Data Systems    155.212.1.12    s       r
#-----------------------------------------------------------------
# Title: Indiana State University
# Where: Indiana, USA
# Info:  Attempts to maintain a 24-hour a day signal on a greenhouse!
# WWW:
# Human: Timothy Mulkey <lsmulky@scifac.indstate.edu>
# Host:  mama.indstate.edu
#
alias   (USA) Indiana State Univ.       139.102.70.201  s       r
#-----------------------------------------------------------------
# Title: LappDoggware Co.
# Where:
# Info:
# WWW:
# Human: John Lee <leejb@laird.ccds.cincinnati.oh.us>
# Okay:
# Host:  laird.ccds.cincinnati.oh.us
#
alias   (USA) LappDoggware      129.137.180.2   s       r
#-----------------------------------------------------------------
# Title: laUNChpad, Extended Bulletin Board Service
# Where: Univ. of North Carolina, Chapel Hill, North Carolina, USA
# Info:  email, USENet, gopher and other research services (free,
#        public-access to the world-at-large)
# WWW:
# Human: Williams, Michael G. <michael@lambada.oit.unc.edu>
# Host:  lambada.oit.unc.edu
```

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```
#
alias   (USA) laUNChpad EBBS    152.2.22.80     s       r
#-------------------------------------------------------------------
# Title: University Libraries Systems Dept, King Library, Miami Univ
# Where: Oxford, Ohio, USA
# Info:
# WWW:
# Human: "Peter Murray" <MurrayPE@muohio.edu>
# Okay:  25 Oct 1994, Peter
# Host:  old-holmes.lib.muohio.edu
#
alias   (USA) Miami Univ. (Ohio)        134.53.24.5     s       r
#-------------------------------------------------------------------
# Title: NASA Select Reflector
# Where: Lewis Research, Cleveland, USA
# Info:  Receive only, please.
# WWW:   http://netgopher.lerc.nasa.gov/NASA_Select/NASA_Select.html
# Human: Michael Baldizzi <mbaldizzi@lerc.nasa.gov>, +1.216.433.5120
# Okay:  94-09-08, mbaldizzi
# Host:  quark.lerc.nasa.gov
#
alias   (USA) NASA Select       139.88.27.43    n       r
#-------------------------------------------------------------------
# Title: Network Solutions, Inc.
# Where: Herndon, Virgina, USA
# Info:  This is a public reflector restricting clients to 80kbps.
#        Currently configured for Maven/VAT; nv and multicast capable.
# WWW:   http://www.netsol.com/
# Human: stanb@netsol.com
# Host:  nic.ops.netsol.com
#
alias   (USA) Network Solutions 198.41.0.200    s       r
#-------------------------------------------------------------------
# Title: North Carolina State Univ. Multimedia Lab
# Where: Raleigh, North Carolina, USA
# Info:
# WWW:   http://magneto.csc.ncsu.edu/
# Human: Scott Callicutt <sfcallic@magneto.csc.ncsu.edu>
# Host:  magneto.csc.ncsu.edu
#
alias   (USA) N. Carolina State Univ.   152.1.57.56     s       r
#-------------------------------------------------------------------
# Title: NYSERNet (New York State Education and Research Network)
# Where: Liverpool, New York, USA
# Info:  Please don't send still shots to this reflector.
# WWW:   http://nysernet.org/
# Human: jpolly@nysernet.org (Jean Armour Polly), don@nysernet.org
# Okay:  94-09-08, jpolly
# Host:  nysernet.org
#
alias   (USA) NYSERNet  192.77.173.2    s       r
#-------------------------------------------------------------------
# Title: Academic Technology Services, The Ohio State University
# Where: Columbus, Ohio, USA
# Info:  Don't send still screen shots.
# WWW:   http://www.acs.ohio-state.edu/
# Human: Harpal Chohan <chohan+@osu.edu>
# Okay:  94-11-18, hsc
# Host:  davros.acs.ohio-state.edu
#
alias   (USA) Ohio State Univ.  128.146.116.8   n       r
```

```
#-------------------------------------------------------------------------
# Title: Center for Academic Computing, Penn. State
# Where: Univ. Park, Pennsylvania, USA
# WWW:   http://www.psu.edu/
# Info:  CU-SeeMe users should still keep their settings down.
# Human: John Kalbach <kalbach@cac.psu.edu>
# Okay:  94-09-08, rod_murchison
# Host:  hornet.cac.psu.edu
#
alias   (USA) Penn State        128.118.58.54   s       r
#-------------------------------------------------------------------------
# Title: QMS, Inc.
# Where: Mobile, Alabama, USA (reflector in Santa Clara, CA)
# Info   QMS manufactures laser printers (color and monochrome) for
         product information contact: info@qms.com
         Reflector linking available, inquire within.  Maven.
# WWW:   http://www.qms.com/ (Best of the Web Nominee)
# Human: jamesh@qms.com (James Hill), +1.205.639.3274
# Okay:  94-09-08, jamesh
# Host:  gatekeeper.imagen.com
#
alias   (USA) QMS       161.33.3.1      s       r
#-------------------------------------------------------------------------
# Title: Archer Instructional Media Center, Seattle Pacific Univ.
# Where: Seattle, Washington, USA
# Info:  Typically on from 8am-5pm Pacific Time, Monday - Friday.
# WWW:
# Human: Tim Kennedy <tkennedy@spu.edu>
# Okay:  94-12-01, Tim
# Host:  adam.spu.edu
#
alias   (USA) Seattle Pacific Univ.     192.190.33.9    s       r
#-------------------------------------------------------------------------
# Title: Sprintlink (Sprint Telecommunications Corp.)
# Where: Herndon, Virginia, USA
# Info:
# WWW:   http://www.sprintlink.net
# Human: Richard Martin <rmartin@stealth.sprintlink.net>
# Host:  tiny.sprintlink.net
#
alias   (USA) Sprintlink        199.0.55.90     s       r
#-------------------------------------------------------------------------
# Title: Stanford University Medical Center
# Where: Stanford, California, USA
# Info:
# WWW:   http://www-med.stanford.edu/MedCenter/reflect.html
# Human: John Reuling <reuling@med.stanford.edu>
# Host:  mednet2.stanford.edu
# Okay: 95-02-18, reuling
#
alias   (USA) Stanford Univ Med Ctr     171.65.4.4      s       r
#-------------------------------------------------------------------------
# Title: Univ. Hawai'i, Manoa Innovatio Center, Digital Media Lab
# Where: Hawai'i, USA
# Info:
# WWW    http://www.mic.hawaii.edu
# Human: Craig <webmaster@www.mic.hawaii.edu>
# Host:  makaha.mic.hawaii.edu
#
alias   (USA) Univ. Hawai'i     128.171.171.10  s       r
#-------------------------------------------------------------------------
```

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```
# Title: Univ. Kansas, Special Education Video Conferencing Site
# Where: USA
# Info:
# WWW:
# Human:
# Host:  chef.sped.ukans.edu
#
alias   (USA) Univ. Kansas      129.237.247.160 s       r
#-----------------------------------------------------------------
# Title: University of Michigan Medical Center
# Where: USA
# Info:  Audio capable, Mike's personal Sparc SLC.
# WWW:
# Human: mike <squids@umich.edu>
# Okay:  22 Jan 1995, mike <squids@umich.edu>
# Host:  cliff.itn.med.umich.edu
#
alias   (USA) Univ. Michigan    141.214.252.170 s       r
#-----------------------------------------------------------------
# Title: Univ. of Pennsylvania Office of Data Comm. and Computing Services
# Where: Philadelphia, Pennsylvania, USA
# Info:  Short times and minimal audio, please.
# WWW:   http://www.upenn.edu/
# Human: danu@dccs.upenn.edu
# Host:  isis.dccs.upenn.edu
#
alias   (USA) Univ. Penn        130.91.72.36    s       r
#-----------------------------------------------------------------
# Title: University of Texas
# Where: Austin, Texas, USA
# Info:  fairly stable... currently linked with qms.com.
#  WWW:  http://ccwf.cc.utexas.edu/~streak/
# Host:  doc.cc.utexas.edu
# Human: Jason Williams <streak@ccwf.cc.utexas.edu>
#
alias   (USA) Univ. Texas       128.83.108.14   s       r
#-----------------------------------------------------------------
# Title: Virginia Commonwealth University
# Where: Richmond, Virginia, USA
# Info:
# Host:  cabell.vcu.edu
# Human: Jeff Price <jprice@cabell.vcu.edu>
# Okay:  94-12-94, jeff
#
alias   (USA) VA Commonweath Univ.      128.172.157.244 s       r
#-----------------------------------------------------------------
```

APPENDIX
D

Winston-Salem/Forsyth County Schools
Acceptable Use Policy for Internet Access
by School System Employees

General Statement about the Internet

The Internet, a world-wide electronic information infrastructure, is a network of networks used by educators, businesses, the government, the military, and organizations. In schools, the Internet can be used to educate and inform. As a learning resource, the Internet is similar to reference books, magazines, videos, CD-ROMS, and other informational resources. The Internet allows for accessing information outside the four walls of the school building, outside the county, outside the state, outside the country.

The Internet allows users to participate in distance learning activities, to ask questions of experts, to consult with experts, to communicate with other individual users, and to locate materials needed to meet educational and personal goals. Because the Internet is a fluid environment, the information which will be available is constantly changing; therefore, it is impossible to predict with certainty what kinds of information may be accessible. Just as the purchase, availability, and use of other materials does not indicate endorsement of their contents by school officials, neither does making electronic information available imply endorsement of that content.

Policy Intent

This policy is intended to promote the responsible and ethical use of the Internet accounts. In light of that statement, access to the Internet should be used in accordance with practices which ensure that the rights of all users of the Internet are protected. It should be noted that system administrators of various computing facilities which may be accessed through Internet may institute additional regulations to control their use. System administrators are responsible for publicizing any additional regulations concerning the authorized and appropriate use of the equipment for which they are responsible.

General Principles

The same ethical standards that apply to other informational resources apply to the use of the Internet account. Use of these accounts is restricted to "authorized users." For the purpose of this policy, an "authorized user" shall be defined as a school system employee who has been assigned a login ID and password by the school system. Individual users are responsible for the proper use of their accounts, including the protection of their login IDs and passwords. Users are also responsible for reporting any activities which they believe are in violation of this policy to the Program Manager for Media/Technology or designee.

Disciplinary Actions

The Isnet network administrator, with due regard for the right of privacy of users and the confidentiality of their data, has the right to suspend or modify Internet access privileges, examine files, passwords, accounting information, printouts, tapes, and any other material that may aid in maintaining the integrity and efficient operation of the system. Users whose activities are viewed as a threat to the operation of a computing system, who abuse the rights of other users, or who refuse to cease improper behavior will have their use privileges revoked.

Violation of the principles or practices described in this policy statement may result in disciplinary action. Disciplinary action may range from removal of the Isnet account through dismissal. Violation of state or federal statutes may result in civil or criminal proceedings.

COOK MIDDLE SCHOOL
INTERNET ACCEPTABLE USE POLICY

At Cook Middle School, we have access to the Internet in each classroom. In order that the Internet be used appropriately for educational purposes, I agree to access only those sites that are determined by my teacher to be of educational value. I understand that any violation of this policy will result in the termination of my access to the Internet.

I also agree that I will not place my picture or name on any WEB pages that the school maintains and I will submit for teacher approval any text, E-mail or other information that will be displayed on the Cook Middle School WEB site.

SIGNED (STUDENT)____________________________________

As parent(s), I/we agree with this use policy and will allow our student to access the Internet after signing the agreement.

SIGNED (PARENT/PARENTS)____________________________________